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An annotated checklist of the marine macroinvertebrates of Alaska

David T. Drumm • Katherine P. Maslenikov
Robert Van Syoc • James W. Orr • Robert R. Lauth
Duane E. Stevenson • Theodore W. Pietsch

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Cover figure

(top left to bottom right): *Halichondria oblonga* (Porifera); *Cheilonereis cyclurus* (Polychaeta); *Tonicella insignis* (Polyplacophora); *Neptunea lyrata* (Gastropoda); *Pandalus tridens* (Decapoda: Caridea); *Oregonia gracilis* (Decapoda: Brachyura); brachiopod unidentified (Brachiopoda); *Pagurus ochotensis* (Decapoda: Anomura); *Ophiura sarsii* (Ophiuroidea); *Pteraster octaster* (Asteroidea).

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in classification and higher-level systematics have been made. Our checklist increases the number of species documented in Alaska by 70%, adding species described as new (~326), newly identified to Alaska (~227), or known only from more northern areas, including the Arctic (~943). Of the 40 higher taxa listed, only eight did not change in number of species, with eight taxa having at least double and four taxa having more than triple the number of species, led by crustacean amphipods with an additional 367 species since Austin (Table 1).

Foster[1] listed the invertebrates occurring in Prince William Sound. Two other general sources for the identification of the Alaskan marine invertebrate fauna were produced in the context of guides rather than taxonomic lists: Kessler's (1985) "Alaska's Saltwater Fishes and Other Sea Life" and Clark's[2] "Field Guide to the Benthic Marine Invertebrates of Alaska's Shelf and Upper Slope." These guides treat the species commonly encountered in groundfish trawls in the eastern Bering Sea, Aleutian Islands, and the Gulf of Alaska. They give a brief description of each species along with general geographic and depth distributions. Some poorly known groups (e.g., bryozoans, sea anemones) are either underrepresented or not treated at all. Other resources cover the more southern areas, generally treating Alaskan invertebrates only when their ranges extend into more southern regions. Examples include the "Light's Manual of the Intertidal Invertebrates of the Central California Coast" (Light et al., 1975) and the guide to the "Marine Invertebrates of the Pacific Northwest" (Kozloff, 1987).

This work constitutes an important step in establishing a baseline for understanding a major but under-studied component of Alaskan marine ecosystems, and will provide a foundation for further species-specific research focused on biology and changes in invertebrate distribution and abundance. A better understanding of the presence and distribution of Alaska biota will in turn encourage and facilitate large-scale studies of ecosystems. Updated species lists reflect the current state of knowledge of ecosystem biodiversity and are thus essential for conservation planning and management. We agree with Padial and De la Riva (2006:865), who stated that "Rigorous updated taxonomic lists should be the most important documents on which conservation policies and macroecology rely." A clear understanding of the distribution and abundance of marine species is a necessary prerequisite for effective monitoring and predictions about future changes to marine ecosystems, and this understanding can only be achieved with reliable identifications based on a sound taxonomic framework.

Methods

For each species included in this checklist, the following information is presented: the currently accepted scientific name (in bold type), significant synonyms (in smaller font), common names (when available), type locality (the place where a holotype or type specimen was found), geographic and depth distributions, a brief statement of abundance in Alaska when known (e.g., rare, uncommon, common, abundant), and other general remarks.

The phyla are listed in order of complexity, from simplest (Porifera) to most complex (Chordata), and the order in which they are listed follows the invertebrate zoology textbook "Invertebrates" (Brusca and Brusca, 2003). A question mark before a scientific name indicates that the presence of the species in Alaska is probable but not confirmed. For example, there were many instances in which the type locality and/or geographic distribution for a species was listed as the Bering Sea without specifying the eastern or western side. A question mark in the synonymy and distribution sections indicates uncertainty due to two or more sources conveying different information. The abbreviation "*auctt.*" (short for auctorum and means "of authors") is a term used to indicate that a name is used in the sense of a number of subsequent authors and not in its (different) sense as established by the original author. It is often used in conjunction with "non" to indicate a misapplied name.

Type localities are those provided in the original description or in secondary sources where available. When these sources were unavailable, the type locality is listed as "not traced." Type localities are reported in abbreviated format for nearly all species. Locality descriptions were translated from the original language and updated to reflect modern usage when unambiguous. The phrases "*In Oceano*" and "*In pelago*" as used by early authors, such as Linnaeus (1958), are presumed to refer to the North Atlantic Ocean around western Europe. Subsequent designations of lectotypes or neotypes were not thoroughly traced to determine type localities.

The geographic area covered includes all of Alaska's marine waters: Arctic Alaska (western Beaufort and eastern Chukchi seas), the eastern Bering Sea, the western Aleutian Islands east to the Alaska Peninsula, and the Gulf of Alaska to Southeast Alaska at Dixon Entrance. The general areas referred to as "northern" and "southern" Alaska are divided by the Alaska Peninsula. Ranges are reported in the general order of the species' global range when widespread (e.g. circumglobal, circumpolar) to its range in Alaska and the eastern North Pacific, generally from north to south and west to east, followed by its extralimital range in the western North Pacific and North Atlantic as well as other regions of the world. Depths reported for species in the list range from the intertidal zone to the upper continental slope and, for a few species, the abyss, and cover the entire known range of the species, not only for Alaskan waters. Terms for habitat zones generally follow Hedgpeth (1957). However, most descriptions of depth distributions listed here are taken directly from either original descriptions or taxonomic revisions, and the terminology employed by the original authors is unchanged.

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[1] Foster, N. R. 2003. Database on the marine invertebrate macrofauna of Prince William Sound: An addition to the University of Alaska Museum's ARCTOS Network. Exxon Valdez Oil Spill Gulf of Alaska Monitoring and Research Project 030642, Final Report. [Available at http://www.evostc.state.ak.us/Store/FinalReports/2003-030642-Final.pdf]

[2] Clark, R. N. 2006. Unpubl. manuscript. Field guide to the benthic marine invertebrates of Alaska's shelf and upper slope taken by NOAA/NMFS/AFSC/RACE Division trawl surveys, 302 p.

The statement of abundance is primarily based on data obtained from the Alaska Fisheries Science Center (AFSC) trawl catches, augmented with information from other accounts. When noted, abundance refers only to the presence of the species in Alaska and is not noted when abundance is unknown or uncertain. Full citations are provided for publications listed in the introduction of each major taxonomic group and for references used in the "Remarks" section under selected species. No attempt was made to include full taxonomic citations for each valid name or synonym.

This checklist is focused on macroinvertebrates, a term used loosely here to refer to an invertebrate that is large enough to be seen without the use of a microscope or, specifically, one that is retained on a 0.5 mm sieve. Some groups, such as the nematodes, oligochaetes, copepods, and uniramians, which qualify as macroinvertebrates, were not included because of their poor representation in trawls, as well as a general lack of knowledge about these groups.

Data sources

Several different types of data sources were used to compile this checklist, including monographic revisions, original species descriptions, published checklists and guides, online databases, and fisheries survey databases. We also list unpublished records of species that are expertly identified as well. Most important in our initial surveys were two online databases: the Integrated Taxonomic Information System (ITIS – http://www.itis.gov) and the World Register of Marine Species (WoRMS – http://www.marinespecies.org; Appeltans et al., 2012). These databases provide the most comprehensive and authoritative list of species worldwide in a readily accessible format. Most significantly, both are controlled by a suite of expert taxonomists, who evaluate the reliability of the information contained in the database (Appeltans et al., 2012).

In particular, WoRMS was a very valuable source of information. Not only does it provide information on currently accepted names of taxa, but it often lists synonymies, distributions, biological and ecological notes, relevant publications, and other ancillary information. A significant drawback for anyone compiling a regional list such as ours, however, is the uneven descriptions of species ranges among geographic areas. While the problem is not restricted to digital databases, the problem is more acute because of the necessity of matching search terms precisely with data records. In our case, most species occurring in Alaska are not listed on the WoRMS website as occurring in "Alaska." For example, a search in Distribution for all species recorded in "Alaska" retrieved only about 100 species, although thousands more species are included in the database that are known without question to be found in Alaskan waters. Searching using less inclusive areas, such as water bodies, finds additional species, but again all species known from the given water body are not retrieved. Clearly, Alaskan records are underrepresented or unrecognized, and we hope that this checklist will remedy that situation.

Information gleaned from online databases was checked against either original sources or the secondary literature in order to ensure accuracy. WoRMS, in particular, provides links to other sources of information including, for example, the genetic databases BOLD (Barcode of Life; Ratnasingham and Hebert, 2007) and GenBank (Benson et al., 2011), publications held at the Biodiversity Heritage Library (http://www.biodiversitylibrary.org/), and illustrations of species. Among published works, recent systematic revisions were particularly sought, as these are usually complete with up-to-date information, such as full synonymies, type localities, and geographic and depth distributions. Other important sources included taxonomic catalogs and reviews, which usually describe specimens or species of a group of organisms that are found in a certain geographic region or in the collections of a particular museum. Taxonomic catalogs are variable in their information content, but may provide depth distributions and type localities.

In instances when nomenclature usage was in conflict, we used the American Fisheries Society's lists of common and scientific names for crustaceans (McLaughlin et al., 2005), cnidarians and ctenophores (Cairns et al., 2002), and mollusks (Turgeon et al., 1998) as our standards, authorities that are also followed by ITIS. However, these sources did not always agree with each other, with two or more names considered valid for a single species. In these cases, some subjective judgement was applied based mainly on general usage. This ambiguity is due to the constant flux of invertebrate taxonomy, and the fact that taxonomists do not always agree on nomenclatural or species recognition issues.

Some published species lists developed from surveys of geographical regions did not indicate how species were identified. These species were not included without additional documentation from other sources.

Table 1

Number of species found in Alaskan marine waters, comparing numbers of species listed in the most comprehensive recent checklist of Austin (1985) and the present checklist.

Taxa	Austin (1985)	Present list
Porifera	84	231
Hydrozoa	137	175
Anthozoa	41	120
Staurozoa	0	1
Scyphozoa	10	9
Ctenophora	6	6
Turbellaria	7	7
Nemertea	43	59
Entoprocta	1	1
Priapulida	1	1
Polychaeta	231	419
Hirudinea	3	6
Echiura	8	13
Sipuncula	8	13
Aplacophora	5	11
Polyplacophora	45	57
Gastropoda	439	621
Bivalvia	195	207
Scaphopoda	10	10
Cephalopoda	27	33
Pycnogonida	17	60
Branchiopoda	2	2
Cirripedia	30	35
Amphipoda	144	511
Cumacea	18	38
Tanaidacea	24	38
Isopoda	38	90
Lophogastrida	3	5
Mysida	30	43
Euphausiacea	13	14
Decapoda	155	203
Brachiopoda	7	8
Bryozoa	89	272
Chaetognatha	5	5
Crinoidea	4	7
Asteroidea	66	136
Ophiuroidea	35	73
Echinoidea	19	25
Holothuroidea	29	49
Hemichordata	1	2
Tunicata	29	92
Total	2059	3708

Unfortunately many ecological and zoogeographic studies do not cite the taxonomic papers and keys used by the authors to make identifications, and information in existing databases is often inaccurate. Therefore, to the extent possible, information taken from non-taxonomic publications and databases was checked with valid taxonomic resources, rather than relying on records of unverified authenticity. More specific information on the data sources used is listed under each of the major invertebrate groups (e.g., Gastropoda, Anthozoa, Isopoda).

Marine geography of Alaska

Within Alaska, geographic ranges are divided into four major well-demarcated regions (Fig. 1): 1) Arctic Alaska, which includes the western Beaufort Sea to the eastern border with Canada and the eastern Chukchi Sea to the western border with Russia and south to the Bering Strait; 2) the eastern Bering Sea, bordered to the northwest by the international border with Russia and the Bering Strait, and to the south by the arc of the Alaska Peninsula and the Aleutian Islands; 3) the Aleutian Islands, extending from Unimak Pass to the Commander Islands and forming an arc between the Bering Sea to the north and the Pacific Ocean to the south; and 4) the Gulf of Alaska, which lies off the southern coast of Alaska from Unimak Pass to Southeast Alaska and the border with British Columbia.

These regions are contained within two zoogeographic provinces: the Arctic and Aleutian (Briggs, 1974, 1995; Allen and Smith, 1988; Logerwell et al., 2005). The cold Arctic Province comprises Arctic Alaska north of the Bering Strait, as well as an area to the south influenced by a seasonal tongue of cold water from the Arctic that extends along the western Bering Sea continental shelf and to the midshelf zone of the southeastern Bering Sea at about the latitude of the Pribilof Islands (Stevenson and Lauth, 2012), where it interacts with the warmer waters of the Aleutian province. The Aleutian Province includes the Aleutian Islands, southeastern Bering Sea, and Gulf of Alaska, where the warmer waters of the Oregonian province continue to the south.

In Arctic Alaska, the predominant water flow is from the south through the Bering Strait into the broad and shallow Chukchi Sea from the Alaska Coastal Current in the east, which continues north and east into the Beaufort Sea (Fig. 2). Farther north, the Beaufort Gyre maintains a clockwise circulation over deeper waters. The Arctic is strongly influenced by the presence of sea ice, which limits opportunities for biological and oceanographic sampling.

The Arctic region is dominated by benthic invertebrates but, despite high abundance and biomass of some species (Piepenburg, 2005; Feder et al., 2007), overall species diversity is relatively low due to the hostile environment, the relative homogeneity of benthic habitats, a young geological age, and a lack of biogeographic isolation (Sirenko, 2009; Iken et al., 2010; Piepenburg et al., 2011). However, the perception of lower diversity may be an artifact of limited sampling or inadequate data, as recent research suggests that the Arctic invertebrate fauna is more diverse than previously thought (Bluhm

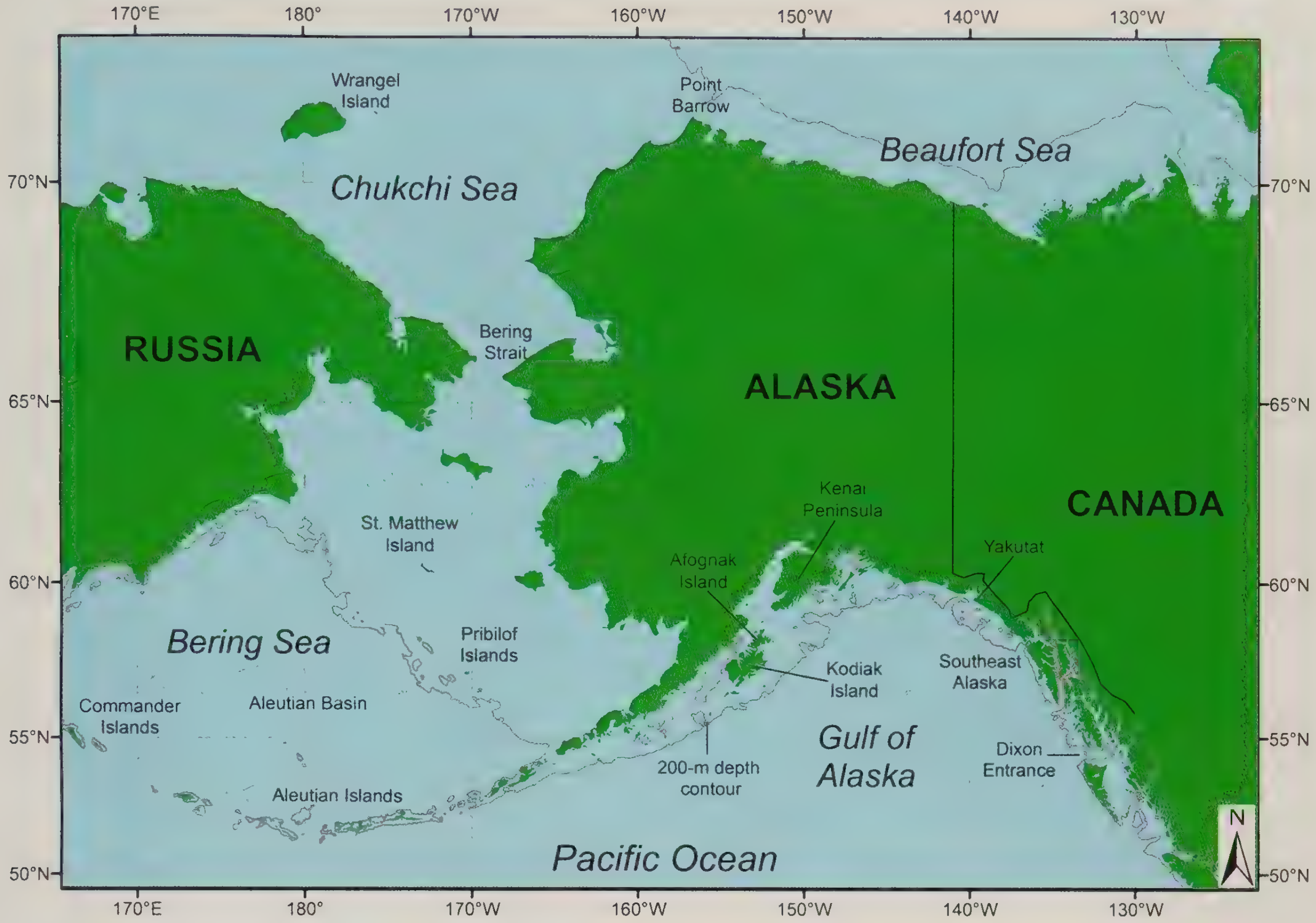
170°E
180°
170°W
160°W
150°W
140°W
130°W
70°N
65°N
60°N
55°N
50°N
Wrangel Island
Point Barrow
Beaufort Sea
Chukchi Sea
RUSSIA
Bering Strait
ALASKA
CANADA
Kenai Peninsula
St. Matthew Island
Afognak Island
Yakutat
Bering Sea
Pribilof Islands
Kodiak Island
Southeast Alaska
Commander Islands
Aleutian Basin
Gulf of Alaska
Dixon Entrance
200-m depth contour
Aleutian Islands
Pacific Ocean
N

Figure 1

Major marine water regions and 200 m bathymetric contour lines of Alaska.

et al., 2011; Piepenburg et al., 2011). Other major contributions to biodiversity research on the Arctic Alaskan invertebrate fauna include G. E. MacGinitie (1955), N. MacGinitie (1959), Bernard (1979), Feder et al. (1994, 2005, 2007), Sirenko (2009), and Sirenko and Vassilenko (2009).

In contrast to the relatively narrow continental shelf in the western Bering Sea, the eastern Bering Sea is dominated by an immense shelf that supports large commercial fisheries and is characterized by three hydrographic domains: a shallow, warmer coastal zone (0–50 m depth); a midshelf zone (50–100 m); and the deeper and colder outer shelf zone (Kinder and Schumacher, 1981). Off the continental shelf to the west, the continental slope drops off to the poorly sampled Aleutian Basin, which reaches depths over 3500 m. The Bering Sea gyre maintains a counterclockwise flow along the Aleutian Islands with the Aleutian North Slope Current, north and east with the Bering Slope Current, and to the west as the Kamchatka Current (Fig. 2).

The eastern Bering Sea shelf is subject to seasonal ice cover that varies dramatically from year to year, as well as a subsurface pool of cold water on the middle domain that persists after the annual retreat of the sea ice (Wyllie-Echeverria and Wooster, 1998; Stabeno et al., 2001; Stevenson and Lauth, 2012). The sea floor of the Bering Sea is generally flat and featureless, with surface sediments consisting primarily of mud and sand (Naidu, 1988). Rocky substrate and complex sea floor topography are generally limited to deepwater canyons and the areas around the Pribilof Islands and St. Matthew Island.

The major components of the Bering Sea invertebrate fauna are relatively well known, and the abundance and distribution patterns of the fauna at the aggregate level have been documented by several studies (e.g., McConnaughey et al., 2000; Conners et al., 2002; Hoff, 2006; Yeung and McConnaughey, 2006; Stevenson and Lauth, 2012). However, with the exception of a few common and easily identifiable species, specific information on the abundance and distribution of invertebrate taxa is scarce. Published survey data generally indicate that invertebrate biomass on the Bering Sea shelf is dominated by asteriid sea stars and oregoniid crabs (Jewett and Feder, 1981; Stevenson and Lauth, 2012).

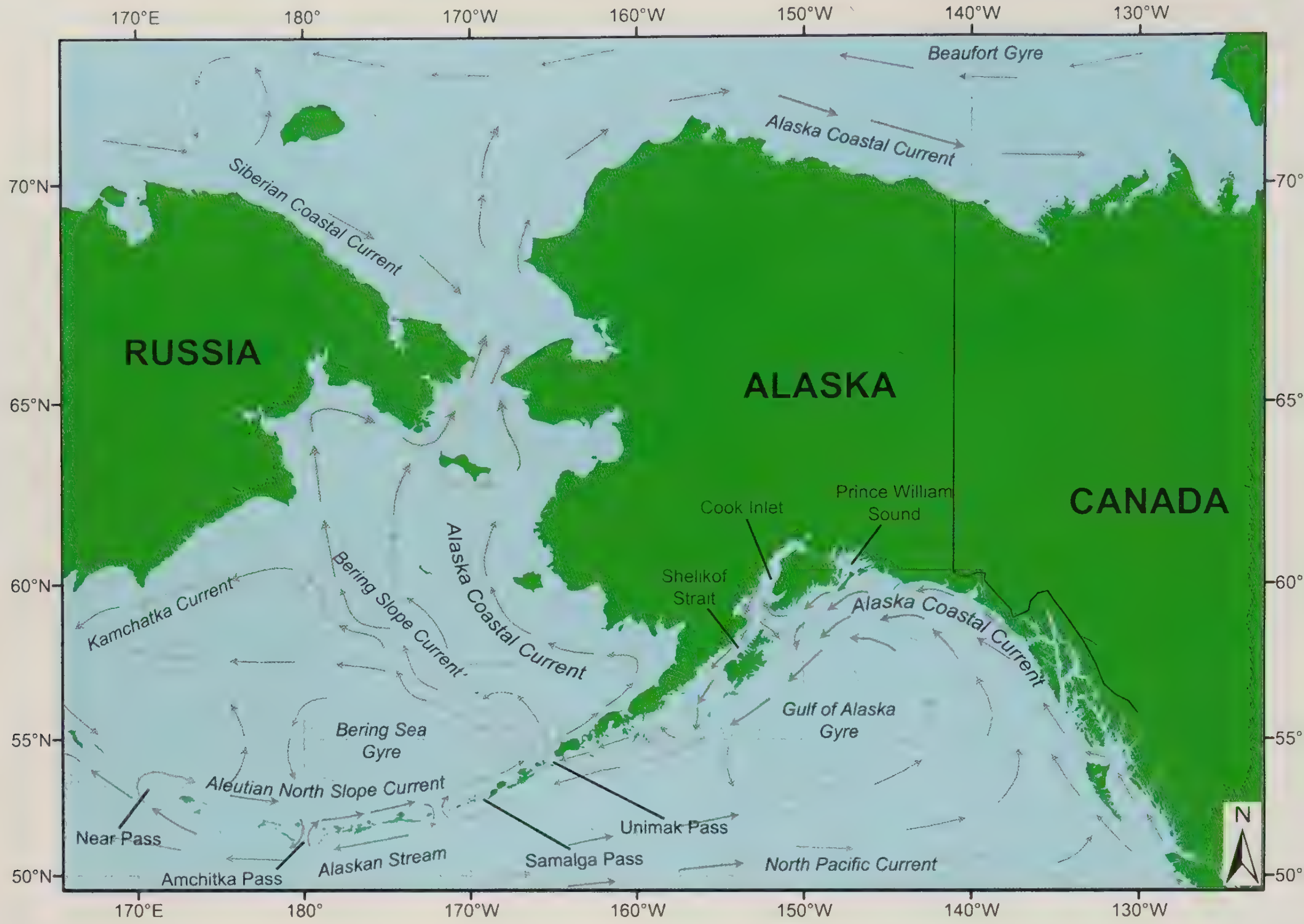
170°E
180°
170°W
160°W
150°W
140°W
130°W
70°N
65°N
60°N
55°N
50°N
Beaufort Gyre
Alaska Coastal Current
Siberian Coastal Current
RUSSIA
ALASKA
CANADA
Cook Inlet
Prince William Sound
Shelikof Strait
Alaska Coastal Current
Alaska Coastal Current
Bering Slope Current
Kamchatka Current
Gulf of Alaska Gyre
Bering Sea Gyre
Aleutian North Slope Current
Near Pass
Amchitka Pass
Alaskan Stream
Samalga Pass
Unimak Pass
North Pacific Current
N

Figure 2

Major oceanic currents and gyres of Alaska, including larger passes of the Aleutian Islands.

Within the Aleutian Islands, three wide passes differentiate three regions (Logerwell et al., 2005). The eastern Aleutian Islands region extends from Unimak Pass in the east to Samalga Pass in the west and is strongly associated faunistically with the southeastern Bering Sea and western Gulf of Alaska; the central Aleutian Islands region extends from Samalga Pass to Amchitka Pass, apparently relatively isolated with a high level of endemism; and the western Aleutian Islands region extends west to Near Pass between the far western Aleutian Islands and the Russian Commander Islands of the Kuril province (Fig. 2). A weak westward flow of water (the Alaskan Stream) predominates on the south side of the islands, while a stronger eastward flow (the Aleutian North Slope Current) dominates the north side (Fig. 2).

The Aleutian Islands support a highly diverse invertebrate fauna, in large part due to the geologic dynamism and heterogeneity of the region and high water flows between the North Pacific Ocean and the Bering Sea throughout the area (Logerwell et al., 2005). New species in this area continue to be discovered. For example, during 2010-2011 several new species of sea stars (Clark and Jewett, 2010, 2011a,b; Eernisse et al., 2010), corals (Cairns, 2011a; Cairns and Lindner, 2011), bryozoans (Dick et al., 2011), and sponges (Stone et al., 2011) were described. Many of these species appear to be endemic to the Aleutian Island region. Many new species of sponges (Stone[3]) and gastropods (Clark[4]; McLean[5]) have recently been discovered and await description. Significant range extensions of mollusks (Vermeij et al., 1990) and shrimps (Drumm et al., 2013) have also recently been recognized.

Regions of the Gulf of Alaska are defined by the breadth of the continental shelf and the intricate topography and bathymetry of the coastal areas. In the western region, the fauna is strongly influenced by the Aleutian Islands and the narrow, rugged shelf punctuated by island groups. To the northeast the shelf widens to the Kodiak Island archipelago, where water flow is dominated by outflows from Cook Inlet through the Shelikof Strait in the west and between Afognak Island and the Kenai Peninsula to the east, with broad banks to the southeast that support fisheries. Farther east, the deep embayment of Prince William Sound and the deep convoluted fjords of Southeast Alaska are separated by the Yakutat region, a rugged area of low diversity on a broad shelf. The Alaska Coastal Current in shallower water and the Gulf of Alaska gyre in deeper waters circulate water counterclockwise from the southeast to the western Gulf of Alaska and eastern Aleutian Islands (Fig. 2). The Coastal Current continues flowing north into the Bering Sea.

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[3] Stone, R. P. 2012. Personal commun. Alaska Fisheries Science Center, NOAA, Juneau, AK 99801.

[4] Clark, R. N. 2012. Personal commun. Insignis Biological Consulting, Eagle Mountain, Utah 84005.

[5] McLean, J. H. 2011. Personal commun. Natural History Museum of Los Angeles County, 900 Exposition Blvd., Los Angeles, CA 90007.

Portions of the Gulf of Alaska are perhaps the best known marine ecosystems of the region, especially because of studies conducted under the auspices of the Outer Continental Shelf Environmental Assessment Program (OCSEAP; summarized in Feder and Jewett, 1986; and Hood and Zimmerman, 1986) and the Census of Marine Life Natural Geography in Shore Areas (Iken et al., 2010; Pohle et al., 2010). In some localized areas, temporal changes in invertebrate communities have been documented because the components of the communities were well characterized at the species level after years of sampling and consistent identifications. For example in Prince William Sound, taxonomically detailed studies of the subtidal benthic fauna conducted related to oil-industry operations and earthquakes (Feder and Blanchard, 1998; Blanchard et al., 2002; Blanchard et al., 2010). These studies have allowed assessments of the effects of these anthropogenic or natural events on the biological communities.

Similarly detailed studies of communities in Pavlof Bay in the northern Gulf of Alaska have demonstrated dramatic reorganization in the wake of a regime shift (Anderson and Piatt, 1999; Anderson, 2000). Although well studied, unlike most areas in the Aleutian Islands, only a few new species have been described in the Gulf of Alaska within the last few years: a sponge (Reiswig, 2014), a nephtheid coral (Williams, 2013), a sea anemone (Eash-Loucks and Fautin, 2012), a seastar (Eernisse et al., 2010), a hemichordate (Cameron et al., 2010), and a nemertean worm (Kajihara and Kuris, 2013). However, many more species of sponges have been recognized in the Gulf of Alaska but have not yet been formally described (Stone et al., 2011).

Current status and future directions

Knowledge of Alaskan marine invertebrate biodiversity as a whole is largely incomplete (Fautin et al., 2010), and much exploration and discovery remains to be accomplished. It is clear that many groups need to be revised and redescribed. Several factors make accurate species identification of many groups quite cumbersome (i.e., the lack of good keys, specialists, and comprehensive studies). There are numerous unverified, extralimital records of distribution in Alaska. Records that are not documented with descriptions or illustrations cannot always be relied upon. Ideally, a large number of specimens should be examined in order to study intraspecific variation. Incorporation of molecular tools (e.g., DNA barcoding) can help address some of the problems associated with incomplete records of species distributions and can indicate the presence of cryptic species when traditional taxonomic methods fail. However, even though DNA barcoding is a useful tool, its primary application should be to supplement and strengthen classical morphological taxonomy, not replace it. Photographs of species capturing some of the diversity of the fauna are shown in Figs. 3–6.

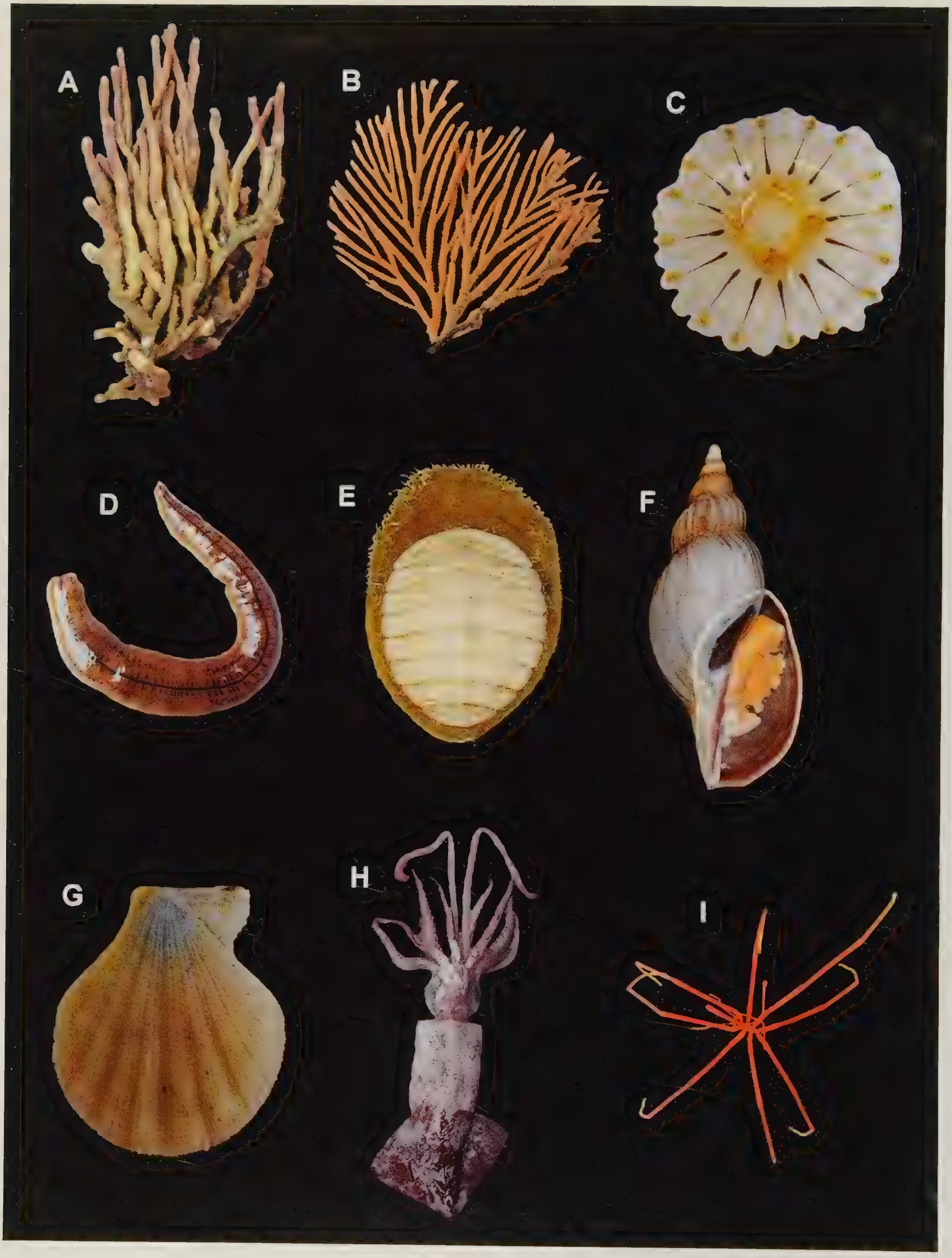
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Figure 3 (facing page)

A. *Axinella blanca* (Porifera); B. *Fanellia* sp. (Anthozoa); C. *Chrysaora melanaster* (Scyphozoa); D. Nemertean worm unidentified (Nemertea); E. *Placiphorella pacifica* (Polyplacophora); F. *Arctomelon tamikoae* (Gastropoda); G. *Chlamys albida* (Bivalvia); H. *Berryteuthis magister* (Cephalopoda); I. Pycnogonid unidentified (Pycnogonida).

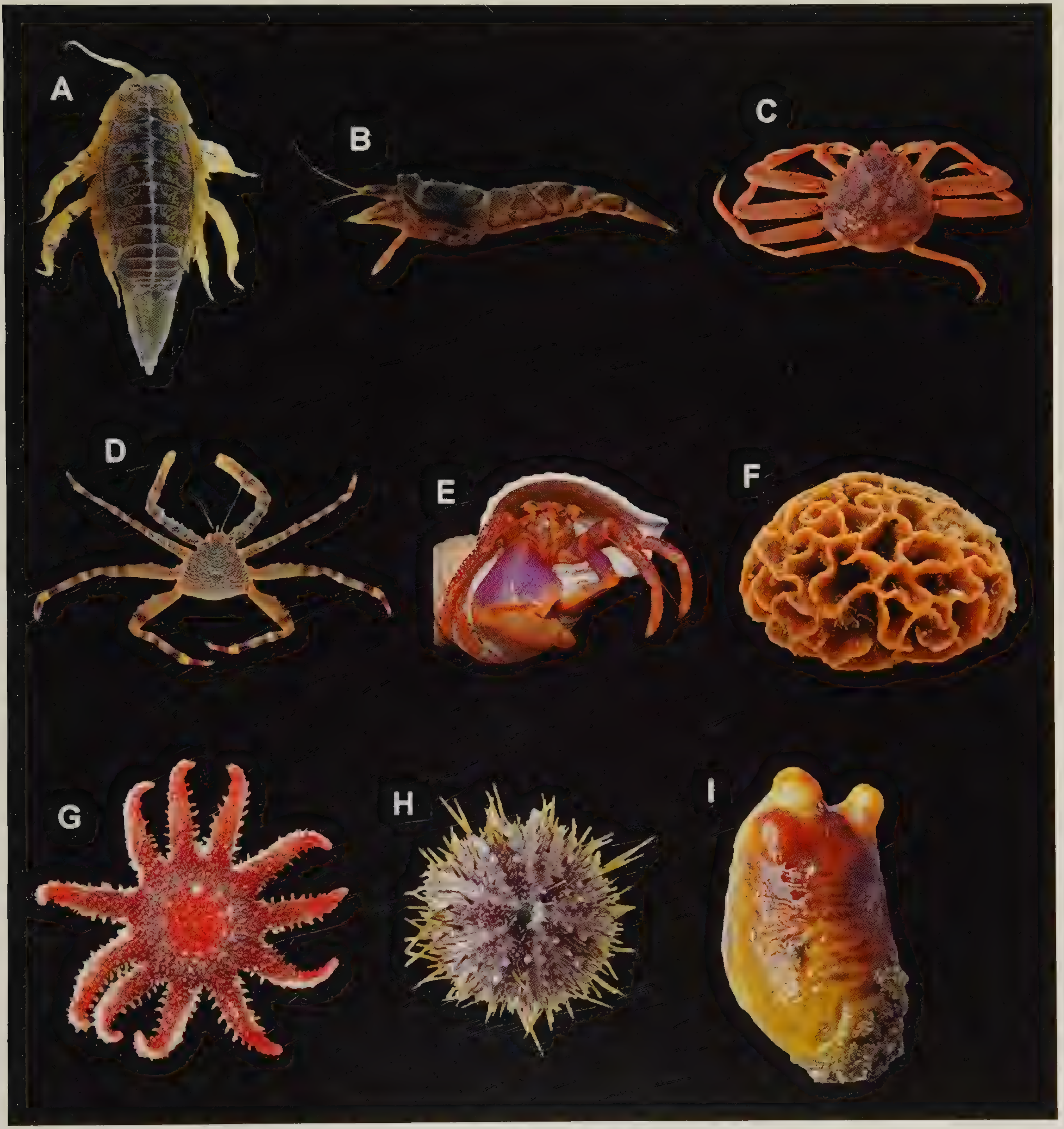

Figure 4

A. *Saduria entomon* (Isopoda); B. *Argis alaskensis* (Decapoda: Caridea); C. *Chionoecetes bairdi* (Decapoda: Brachyura); D. *Placetron wosnessenskii* (Decapoda: Anomura); E. *Elassochirus cavimanus* (Decapoda: Anomura); F. *Ramphostomella costata* (Bryozoa); G. *Crossaster papposus* (Asteroidea); H. *Strongylocentrotus* sp. (Echinoidea); I. *Halocynthia aurantium* (Tunicata).

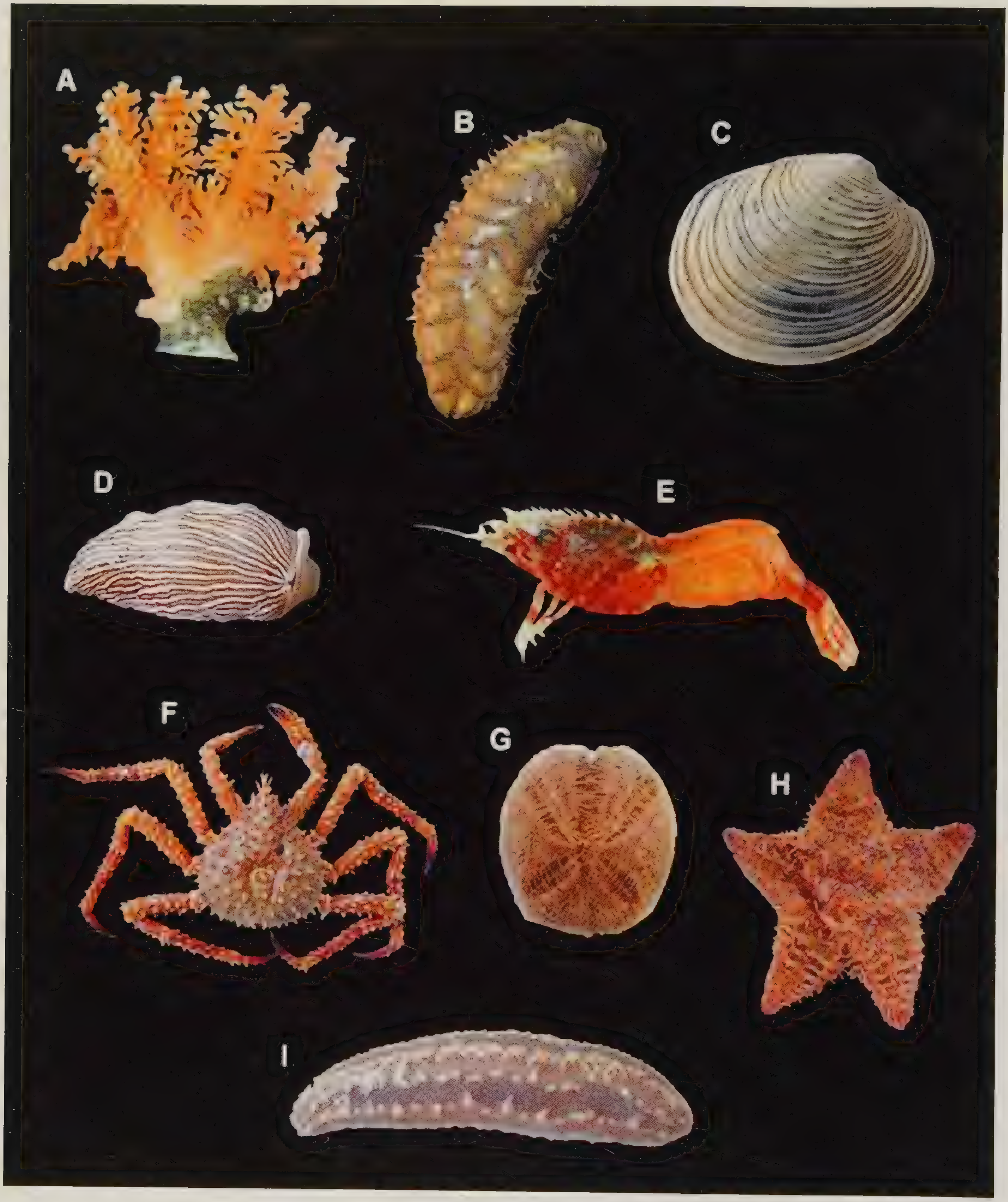

Figure 5

A. *Stylaster brochi* (Cnidaria: Hydrozoa); B. *Eunoe nodosa* (Polychaeta); C. *Humilaria kennerleyi* (Bivalvia); D. *Armina californica* (Gastropoda: Nudibranchia); E. *Spirontocaris arcuata* (Decapoda: Caridea); F. *Lithodes aequispina* (Decapoda: Anomura); G. *Brisaster latifrons* (Echinodermata: Echinoidea); H. *Poraniopsis inflatus* (Echinodermata: Asteroidea); I. *Synallectes challengeri* (Echinodermata: Holothuroidea).

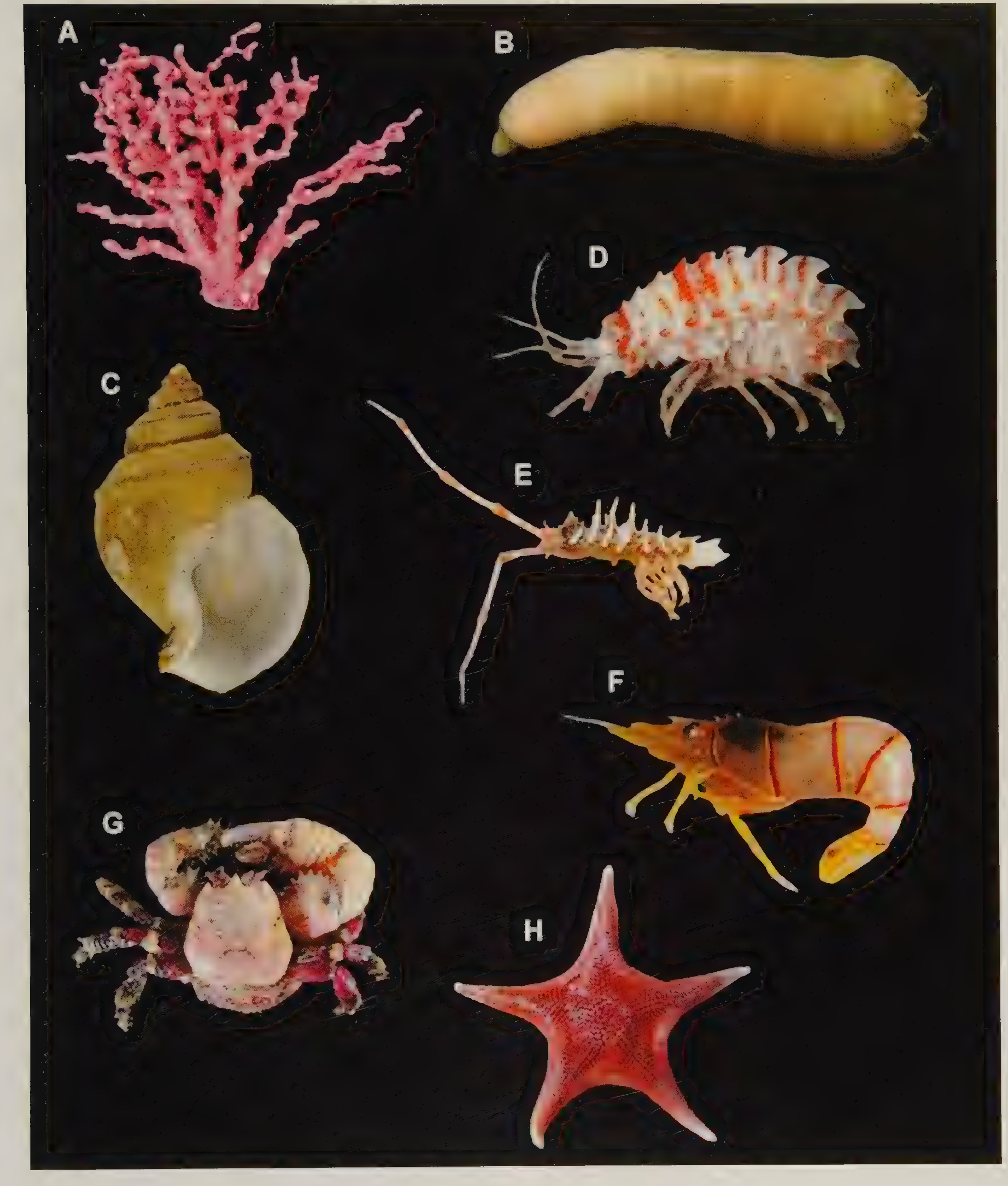

Figure 6

A. *Paragorgia arborea* (Cnidaria: Anthozoa); B. *Echiurus echiurus* (Echiura); C. *Clinopegma magna* (Mollusca: Gastropoda); D. *Paramphithoe polyacantha* (Crustacea: Peracarida: Amphipoda); E. *Arcturus* sp. (Crustacea: Peracarida: Isopoda); F. *Lebbeus grandimanus* (Decapoda: Caridea); G. *Dermaturus mandtii* (Decapoda: Anomura); H. *Mediaster aequalis* (Echinodermata: Asteroidea).

Checklist

Phylum Porifera—The Sponges

Sponges are the only metazoans with a cellular grade of organization (i.e. their bodies lack tissues) and are among the most ancient of multicellular animals, first known from the Precambrian era and well established by the Cambrian era. They are considered to represent an evolutionary "dead end" since no other animal groups are derived from them. Some sponges provide a refuge habitat for fishes and other invertebrates, and may be particularly vulnerable to trawling activity (Stone et al., 2011).

Sponge systematics is notoriously difficult, even for expert sponge taxonomists. This difficulty stems from the great variability in sponge morphology and color, both being strongly influenced by environmental factors. This has led to the study of more reliable taxonomic indicators including the microscopic characteristics of skeletal elements, such as the inorganic spicules and organic fibers. However, spicule morphology can be highly homoplasious and secondary loss of spicules is more common than previously thought (Cárdenas et al., 2011). Modern molecular techniques are currently being applied to sponge taxa in an attempt to solve some of the problems in traditional sponge systematics (see the Sponge Barcoding Project: http://www.spongebarcoding.org/; Vargas et al., 2012). The worldwide diversity may be twice the currently described species count: about 8500 species are recognized as valid, more than 15,000 species may be extant (e.g., Hooper and Lévi, 1994; Hooper and Van Soest, 2002; Van Soest et al., 2012; Vargas et al., 2012). SpongeMaps (Hall, 2013), http://www.spongemaps.org, an online community for sponge taxonomy, integrates morphometric data and images with molecular barcodes in order to promote unidentified or partially identified sponge collections to the level of Operational Taxonomic Units (OTUs), or morphospecies concepts.

Approximately 231 species of sponges are represented in Alaskan waters (Table 1). The recently published guide to the Porifera found at depths greater than 80 m in the Aleutian Islands (Stone et al., 2011) and the monograph on the glass sponges from deep waters of the central Aleutian Islands (Reiswig and Stone, 2013) were instrumental in completing our treatment of this group, and abundance records came strictly from those publications. However, it is clear that much exploration and discovery remain to be accomplished in the sponge fauna of Alaskan waters. Many groups are in need of a revision and many species are yet to be described (Stone[3]). The higher classification of the Demospongiae follows Morrow and Cárdenas (2015). The World Porifera Database (Van Soest et al., 2013) is the world authority on sponges, including taxonomy and biogeography. Recent advances in sponge phylogenetics were presented at the 2013 Symposium "Assembling the Poriferan Tree of Life" and are detailed in the September 2013 issue of the Integrative and Comparative Biology journal (Thacker and Collins, 2013).

Class Calcarea

Subclass Calcaronea

Order Baerida

Family Baeriidae

Leuconia alaskensis de Laubenfels, 1953.

Type locality: Point Barrow, Alaska. Distribution: Chukchi and Beaufort seas; depth >80 m.

Leucopsila cf. ***stylifera*** (Schmidt, 1870).

Leuconia stilifera Schmidt 1870; *Leucandra stilifera:* Haeckel 1872.

Type locality: Greenland. Distribution: Aleutian Islands to British Columbia; Bering Island; Kuril Islands; Greenland; 117–419 m.

Order Leucosolenida

Family Amphoriscidae

Leucilla nuttingi (Urban, 1902). Stalked vase or urn sponge.

Rhabdodermella nuttingi Urban 1902.

Type locality: Monterey Bay, California. Distribution: Northern Alaska to Cape San Quintin, Baja California, Mexico; low intertidal zone to 155 m.

Family Grantiidae

Leucandra ananas (Montagu, 1818).

Spongia ananas Montagu 1818; *Leuconia ananas* (Montagu 1818); *Scypha ananus* (Montagu 1818); *Spongia pulverulenta* Grant 1826; *Grantia pulverulenta* (Grant 1826); *Sycinula penicillata* Schmidt 1869; *Dyssycum penicillatum* (Schmidt 1869).

Type locality: British Isles. Distribution: Beaufort and Chukchi seas; European waters; Greenland; depth >80 m.

Leucandra heathi Urban, 1906. Bristly or spiny vase sponge.

Leuconia heathi (Urban 1906).

Type locality: Monterey Bay, California. Distribution: Northern Alaska to northern Mexico; subtidal zone to 180 m.

Leucandra poculiformis Hozawa, 1918.

Type locality: Sea of Japan. Distribution: Central Aleutian Islands; Sea of Japan; depths near 175 m; rare.

Remarks: Encrusts *Stylaster* hydrocorals.

Leucandra pyriformis (Lambe, 1893).

Leuconia pyriformis Lambe 1893.

Type locality: Pacific coast of Canada. Distribution: Aleutian Islands to Oregon; Japan; depth unknown.

Leucandra taylori Lambe, 1900.
Type locality: Vancouver Island, British Columbia. Distribution: Aleutian Islands to Oregon; littoral zone.

Leucandra tuba Hozawa, 1918.
Type locality: Okinoshima, Sea of Japan. Distribution: Aleutian Islands and Bering Sea canyons; Sea of Japan; 106–250 m; common.

Family Leucosoleniidae

Leucosolenia eleanor Urban, 1906. Lacy ball sponge.
Type locality: Monterey Bay, California. Distribution: Northern Alaska to southern California; Japan; subtidal zone to 27 m.

Family Sycettidae

Sycon compactum Lambe, 1893.
Scypha compacta (Lambe 1893).
Type locality: Vancouver Island, British Columbia. Distribution: Aleutian Islands to Oregon; Japan; subtidal zone.

Subclass Calcinea

Order Clathrinidae

Family Clathrinidae

Clathrina **sp.** ***sensu*** Stone, Lehnert and Reiswig, 2011. Lattice-skin sponge.
Remarks: At least three species are believed to exist in the western North Pacific, but distinguishing them in the field is nearly impossible. The genus is in need of a revision (Stone et al., 2011).

Class Hexactinellida

Subclass Amphidiscophora

Order Amphidiscosida

Family Hyalonematidae

Hyalonema (Cyliconema) apertum apertum Schulze, 1886.
Hyalonema (Stylocalyx) apertum Schulze 1886; *Cyliconema apertum* (Schulze 1886); *Hyalonema maehrenthali* Schulze 1894; *Cyliconema apertum maerenthali* (Schulze 1894); *Hyalonema affine* var. *japonicum* Schulze 1899; *Hyalonema apertum solidum* Okada 1932; *Hyalonema apertum tuberosum* Ijima and Okada 1938.
Type locality: Sagami Bay, Japan. Distribution: Western Aleutian Islands; western North Pacific; Indo-Pacific; bathyal, abyssal, and hadal depths.

Hyalonema (Cyliconema) apertum simplex Koltun, 1967.
Type locality: Siberian Sea. Distribution: Bering Sea; Kamchatka; depth >80 m.

?***Hyalonema (Cyliconema) hozawai vicarium*** Koltun, 1967.
Type locality: Siberian Sea. Distribution: Bering Sea (?Alaska); depth >80 m.

Hyalonema (Leptonema) ovuliferum Schulze, 1899.
Type locality: Southeast Alaska. Distribution: Southern Gulf of Alaska to British Columbia; depth >80 m.

?***Hyalonema (Cyliconema) tenerum vitiazi*** Koltun, 1967.
Type locality: Siberian Sea. Distribution: Bering Sea (?Alaska); depth >80 m.

Subclass Hexasterophora

Order Hexactinosida

Family Farreidae

Farrea aleutiana Reiswig and Stone, 2013.
Farrea sp. nov. Stone et al. 2011.
Type locality: 26.7 km west of Amatignak Island, Delarof Islands, southern Amchitka Pass, Aleutian Islands. Distribution: Central Aleutian Islands; 529–905 m; rare.

Farrea aspondyla Reiswig and Stone, 2013.
Farrea kurilensis ssp. nov. Stone et al. 2011.
Type locality: Adak Canyon, 15.9 km southwest of Cape Yakak, Adak Island, Central Aleutian Islands. Distribution: Known only from type locality; 300–2249 m; common and abundant in some areas.

Farrea occa occa Bowerbank, 1862.
Farrea haeckelii Schulze 1887.
Type locality: Comores Archipelago, western Indian Ocean. Distribution: Cosmopolitan, including eastern Gulf of Alaska (northern limit to 58.2°N); 86–1360 m; common and abundant in some areas.

?***Farrea watasei*** Okada, 1932.
Type locality: Kamchatka. Distribution: Bering Sea (?Alaska); western North Pacific; depth >80 m.

Family Euretidae

Chonelasma oreia Reiswig, 2014.
Chonelasma sp. Reiswig and Frey 2012.
Type locality: Giacomini Seamount, Gulf of Alaska. Distribution: Dickens, Welker, Bowie, and Giacomini Seamounts in the Gulf of Alaska; 751–1726 m.

?***Eurete irregulare*** Okada, 1932.
Type locality: About midway between Sakhalin and

Iturup Island. Distribution: Bering Sea (?Alaska); depth >80 m.

Pinulasma fistulosum Reiswig and Stone, 2013.
Family Euretidae, Genus nov., sp. nov. Stone et al. 2011.
Type locality: 21.7 km southeast of Pochnoi Point, Semisopochnoi Island, Aleutian Islands. Distribution: Central Aleutian Islands; 773–2084 m; common, locally abundant.

Family Aphrocallistidae

Aphrocallistes vastus Schulze, 1886. Cloud or clay pipe sponge.
Aphrocallistes whiteavesianus Lambe 1892.
Type locality: Sagami Bay, Japan. Distribution: Bering Sea, Alaska to Baja California, Mexico; Japan; Siberia; 100–756 m; abundant.
Remarks: This is one of the most ecologically important sponges in Alaska (Stone et al., 2011). It serves as a refuge habitat for juvenile golden king crabs (*Lithodes aequispina*), and the bigmouth sculpin (*Hemitripterus bolini*) deposits its eggs in the spongocoel.

Heterochone aleutiana (Okada, 1932).
Aphrocallistes aleutiana Okada 1932.
Type locality: Western Aleutian Islands. Distribution: Aleutian Islands to Russia; depth >80 m.

Heterochone calyx calyx (Schulze, 1886).
Chonelasma calyx Schulze 1886.
Type locality: Sagami Bay, Japan. Distribution: Bering Sea, Alaska to Panama; Japan; Kuril Islands; Sea of Okhotsk; 21–1103 m; common and abundant in some areas.
Remarks: This species is one of the most ecologically important sponges in Alaska (Stone et al., 2011). It serves as a refuge habitat for juvenile golden king crabs (*Lithodes aequispina*; Stone, 2006).

Heterochone calyx schulzei Koltun, 1967.
Type locality: Kamchatka. Distribution: Bering Sea; depth >80 m.

?*Heterochone tenera* (Schulze, 1899).
Chonelasma tenerum Schulze 1899.
Type locality: California. Distribution: Bering Sea (?Alaska) to California; depth >80 m.

Heterochone* sp. A *sensu Schuchert and Reiswig, 2006.
Type locality: Gulf of Alaska. Distribution: Known only from type locality; depth >80 m.

Family Tretodictyidae

Tretodictyum amchitkensis Reiswig and Stone, 2013.
Tretodictyum sp. nov. Stone et al. 2011.
Type locality: Amchitka Pass, 49.8 km west southwest of Gareloi Island, Aleutian Islands. Distribution: Central Aleutian Islands; 704–1264 m; uncommon, locally abundant in some areas.

Order Lyssacinosida

Family Euplectellidae

?*Euplectella oweni* Herklots and Marshall, 1868.
Type locality: Japan. Distribution: Bering Sea (?Alaska); Japan; depth >80 m.

Holascus undulatus Schulze, 1899.
Type locality: Prince of Wales Island, Arctic. Distribution: Southern Alaska; western North Pacific; depth >80 m.

Regadrella okinoseana Ijima, 1896. Lacy basket sponge.
Regadrella decora Schulze 1900; *Regadrella cylindrica* Ijima 1927.
Type locality: Sagami Bay, Japan. Distribution: Central Aleutian Islands; Indo-West Pacific: India; northwestern and South Australia; New Zealand; New Caledonia; Indonesia; Japan; 390–1395 m; uncommon.

Family Rossellidae

Acanthascus koltuni Reiswig and Stone, 2013.
Acanthascus (Acanthascus) profundum ssp. nov. Stone et al. 2011.
Type locality: Adak Canyon, 15.9 km southwest of Cape Yakak, Adak Island, Aleutian Islands. Distribution: Known only from type locality; 1446–2245 m; rare.

?*Acanthascus mitis* Koltun, 1967.
Acanthascus (Acanthascus) mitis: Stone et al. 2011.
Type locality: Russia. Distribution: Bering Sea (?Alaska); depth >80 m.

?*Acanthascus profundum* Koltun, 1967.
Acanthascus (Acanthascus) alani profundum: Stone et al. 2011.
Type locality: Russia. Distribution: Bering Sea (?Alaska); depth >80 m.

Aulosaccus fissuratus Okada, 1932.
Type locality: Western North Pacific. Distribution: Bering Sea; western Aleutian Islands; western North Pacific; depth >80 m.

Aulosaccus ijimai (Schulze, 1899).
Calycosaccus ijimae Schulze 1899; *Aulosaccus pinularis* Okada 1932, Stone et al. 2011.
Type locality: Southwest of Kodiak Island, Alaska. Distribution: Central Aleutian Islands; Gulf of Alaska; western Bering Sea; Kuril Islands; Kamchatka Peninsula; depth 117–1715 m; rare.

Aulosaccus schulzei Ijima, 1896. Vase sponge.

Aulosaccus albatrossi Okada 1932.

Type locality: Sagami Bay, Japan. Distribution: Central Aleutian Islands; Bering Sea (Pribilof Canyon); central and southern California; Japan; Kuril Islands; Okhotsk Sea; 117–1350 m; rare.

?Bathydorus echinus Koltun, 1967.

Type locality: Russia. Distribution: Bering Sea (?Alaska); depth >80 m.

?Bathydorus laevis spinosus Wilson, 1904.

Type locality: Gulf of Panama. Distribution: Bering Sea (?Alaska); depth >80 m.

Bathydorus **sp.** Reiswig and Stone, 2013.

Type locality: Central Aleutian Islands. Distribution: Known only from type locality; 494 m; rare.

Caulophacus (Caulophacus) adakensis Reiswig and Stone, 2013.

Caulophacus (Caulophacus) sp. nov. Stone et al. 2011.

Type locality: Adak Canyon, 13 km southeast of Cape Yakak, Adak Island, Aleutian Islands. Distribution: Central Aleutian Islands; North Aleutian Slope; 1326–2680 m; uncommon.

?Caulophacus (Caulophacus) elegans Schulze, 1886.

Type locality: Japan. Distribution: Bering Sea (?Alaska); depth >80 m.

?Caulophacus (Caulophacus) schulzei hyperboreus Koltun, 1967.

Type locality: Russia. Distribution: Bering Sea (?Alaska); depth >80 m.

Rhabdocalyptus australis Topsent, 1901.

Rhabdocalyptus australis Topsent 1901; *Acanthascus (Rhabdocalyptus) australis*: Stone et al. 2011.

Type locality: Amundsen (Bellingshausen Sea). Distribution: Bering Sea; Antarctic; depth >80 m.

Rhabdocalyptus borealis Okada, 1932.

Rhabdocalyptus borealis Okada 1932; *Acanthascus (Rhabdocalyptus) borealis*: Stone et al. 2011.

Type locality: Japan. Distribution: Bering Sea; Japan; depth >80 m.

Rhabdocalyptus dawsoni (Lambe, 1893). Sharp lipped boot sponge.

Bathydorus dawsoni Lambe 1893; *Rhabdocalyptus dawsoni* (Lambe 1893); Rhabdocalyptus *dawsoni alascensis* Wilson and Penney 1930; *Rhabdocalyptus dawsoni horridus* Koltun 1967; *Acanthascus (Rhabdocalyptus) dawsoni dawsoni*: Stone et al. 2011.

Type locality: Vancouver Island, Canada, off the mouth of the Qualicum River and in the Strait of Georgia, near Comox. Distribution: Eastern Gulf of Alaska to southern California; 10–500 m; common and abundant.

Rhabdocalyptus heteraster Okada, 1932.

Acanthascus (Rhabdocalyptus) heteraster: Stone et al. 2011.

Type locality: Japan. Distribution: Bering Sea; Japan; depth >80 m.

Rhabdocalyptus mirabilis Schulze, 1899.

Acanthascus (Rhabdocalyptus) mirabilis Stone et al. 2011.

Type locality: South of Shumagin Bank, Alaska. Distribution: Central Aleutian Islands; Gulf of Alaska; Gulf of California; 1143–2790 m; rare.

Remarks: Stone et al. (2011) mentioned that *R. unguiculatus* Ijima, 1904 might be a junior synonym of this species.

Rhabdocalyptus unguiculatus Ijima, 1904.

Acanthascus (Rhabdocalyptus) unguiculatus: Stone et al. 2011.

Type locality: Japan. Distribution: Western Aleutian Islands; Japan; depth >80 m.

Scyphidium tuberculatum (Okada, 1932).

Aulosaccus tuberculatus Okada 1932.

Type locality: Western Aleutian Islands. Distribution: Bering Sea; western Aleutian Islands; depth >80 m.

Staurocalyptus dowlingi (Lambe, 1893). Round lipped boot sponge.

Rhabdocalyptus dowlingi (Lambe 1893); *Acanthascus (Staurocalyptus) dowlingi*: Stone et al. 2011.

Type locality: Strait of Georgia, Vancouver Island. Distribution: Central Alaska to southern California; subtidal zone to 924 m.

Staurocalyptus psilosus Reiswig and Stone, 2013.

Acanthascus (Staurocalyptus) sp. nov. 2 Stone et al. 2011.

Type locality: North Amchitka Pass, 50.9 km west southwest of Gareloi Island, Aleutian Islands. Distribution: Central Aleutian Islands; 190–1556 m; common and locally abundant in some areas.

Staurocalyptus rugocruciatus Okada, 1932.

Acanthascus (Staurocalyptus) rugocruciatus: Stone et al. 2011.

Type locality: Western Aleutian Islands. Distribution: Bering Sea; western Aleutian Islands; depth >80 m.

Staurocalyptus solidus Schulze, 1899.

Acanthascus (Staurocalyptus) solidus: Stone et al. 2011.

Type locality: California. Distribution: Eastern Gulf of Alaska to southern California (Santa Maria Basin); ?central Aleutian Islands; 82–1373 m; abundant.

Staurocalyptus tylotus Reiswig and Stone, 2013.

Acanthascus (Staurocalyptus) sp. nov. 1 Stone et al. 2011.

Type locality: Adak Canyon, 6.6 km south southeast of Cape Tusik, Kanaga Island, Aleutian Islands. Distribution: Central Aleutian Islands; 139–183 m; common and locally abundant in some areas.

Class Homoscleromorpha

Order Homosclermorphida

Family Plakinidae

Plakina atka Lehnert, Stone and Heimler, 2005.
Type locality: South of Atka Island, Aleutian Islands. Distribution: Central Aleutian Islands; eastern Gulf of Alaska; southern Southeast Alaska; northern British Columbia; 82–253 m; abundant.

Plakina tanaga Lehnert, Stone and Heimler, 2005.
Type locality: Little Tanaga Strait, central Aleutian Islands. Distribution: Known only from type locality; 140–383 m; uncommon.

Class Demospongiae

Subclass Keratosa

Order Dendroceratida

Family Darwinellidae

Aplysilla glacialis (Merejkowski, 1878). Keratose sponge.
Simplicella glacialis Merejkowski 1878.
Type locality: White Sea. Distribution: Arctic Ocean, including Beaufort Sea; ?Southeast Alaska; intertidal zone to 84 m.

Order Dictyoceratida

Family Dysideidae

Dysidea kenkriegeri Lehnert and Stone, 2015.
Type locality: South of Sedanka Island, east end of Unalaska Island, eastern Aleutian Islands, Gulf of Alaska (53°36.6380′N, 166°12.4800′W). Distribution: Known only from type locality; 93 m.

Subclass Heteroscleromorpha

Order Tetractinellida

Suborder Spirophorina

Family Tetillidae

Craniella arb (de Laubenfels, 1930).
Tetilla arb de Laubenfels 1930.
Type locality: Southern California. Distribution: Aleutian Islands; central California to the Gulf of California; 11–272 m; uncommon but locally patchy.

Craniella craniana de Laubenfels, 1953.
Type locality: Point Barrow, Alaska. Distribution: Arctic Alaska (Beaufort and Chukchi seas); 133–225 m.

Craniella sigmoancoratum (Koltun, 1966).
Tetilla sigmoancoratum Koltun 1966.
Type locality: Kuril Islands, Russia. Distribution: Pribilof Canyon, Bering Sea; central Aleutian Islands; Kuril Islands; 190–275 m; uncommon.

Craniella spinosa Lambe, 1893. Spiny tennis ball or spiny puffball sponge.
Type locality: Vancouver Island, British Columbia. Distribution: Eastern Bering Sea to British Columbia; 36–236 m; uncommon.
Remarks: This is a cryptic species, epizoic on *Myxilla pedunculata* and probably other sponges.

Craniella sputnika Lehnert and Stone, 2011.
Type locality: Amchitka Pass, central Aleutian Islands. Distribution: Known only from type locality; 115–191 m; uncommon.

Craniella villosa Lambe, 1893. Tennis ball or gray puffball sponge.
Tetilla villosa (Lambe 1893).
Type locality: Queen Charlotte Islands, British Columbia. Distribution: Eastern Bering Sea; Aleutian Islands; Gulf of Alaska to British Columbia; intertidal zone to 24 m.

Order Merliida

Family Hamacanthidae

Hamacantha (Vomerula) cassanoi Lehnert and Stone, 2016.
Type locality: Fairweather Ground, eastern Gulf of Alaska (58°12.186′N, 138°49.512′W). Distribution: Eastern Gulf of Alaska; 174 m.

Order Agelasida

Family Hymerhabdiidae

Prosuberites salgadoi Lehnert and Stone, 2016.
Type locality: Shutter Ridge, eastern Gulf of Alaska (56°10.716′N, 135°07.062′W). Distribution: Eastern Gulf of Alaska; 190-231 m.

Order Astrophorida

Family Ancorinidae

Ancorina buldira Lehnert and Stone, 2014.
Type locality: Buldir Island, western Aleutian Islands, North Pacific Ocean (52°17.16″N, 175°21.48″E). Distribution: Known only from type locality; 234 m.

Penares cortius de Laubenfels, 1930. Spotted gray or salt and pepper sponge.
Type locality: Pescadero Point, California. Distribution: Gulf of Alaska to the Gulf of California; intertidal zone to 160 m.

Stelletta anthastra Lehnert and Stone, 2014.
Type locality: Islands of Four Mountains, eastern Aleutian

Islands, Bering Sea (52°58.542″N, 170°23.322″W). Distribution: Known only from type locality; 225 m.

Stelletta clarella de Laubenfels, 1930. Thick white prickly sponge.
Type locality: Northern California. Distribution: Gulf of Alaska to northern Mexico; Chile; intertidal and subtidal zones.

Stelletta makushina Lehnert and Stone, 2014.
Type locality: Unalaska Island, eastern Aleutian Islands, Bering Sea (54°00.499″N, 166°56.136″W). Distribution: Known only from type locality; 177 m.

Stelletta ovalae Tanita, 1965
Type locality: Sea of Japan. Distribution: Unalaska Island, eastern Aleutian Islands, Bering Sea; Sea of Japan; 70–177 m.

Stelletta validissima Thiele, 1898.
Type locality: Japan. Distribution: Eastern Bering Sea to British Columbia; Japan; littoral zone.

Family Geodiidae

Erylus aleuticus Lehnert, Stone and Heimler, 2006.
Type locality: North of Amlia Island, central Aleutian Islands. Distribution: Amlia and Atka Islands, central Aleutian Islands; 127–190 m; rare.

Geodia agassizi Lendenfeld, 1910.
Type locality: California. Distribution: Southeast Alaska to southern California; subtidal zone.
Remarks: Alaskan records of *Geodia mesotriaena* are probably *G. agassizi* or *Geodia starki* from the Aleutian Islands.

Geodia japonica Sollas, 1888.
Type locality: Japan. Distribution: Gulf of Alaska; Japan; 82-120 m.

Geodia lendenfeldi (Lendenfeld, 1910).
Geodinella robusta Lendenfeld 1910; *Geodia robusta* (Lendenfeld 1910).
Type locality: Lendenfeld (1910) described three varieties of this species: One from Vancouver Island, British Columbia; one from Naha Bay, Behm Canal, Southeast Alaska; and one from southern California. Distribution: Aleutian Islands and Southeast Alaska to southern California; to a depth of 190 m; rare.

Geodia starki Lehnert, Stone and Drumm, 2013.
Type locality: 34 km west-south-west of Buldir Island, western Aleutian Islands (52°817.16′N, 175°821.48′E). Distribution: Known only from type locality; 234 m.

Family Vulcanellidae

?Poecillastra japonica (Thiele, 1898).
Pachastrella japonica Thiele 1898.
Type locality: Japan. Distribution: Eastern Bering Sea to British Columbia; Japan; littoral zone.

Poecillastra tenuilaminaris (Sollas, 1886).
Normania tenuilaminaris Sollas 1886.
Type locality: Sea of Japan. Distribution: Eastern Bering Sea and Gulf of Alaska; ?Aleutian Islands; California coast and the Gulf of California; Sea of Japan; 71–486 m; common.

Order Clionaida

Family Clionaidae

Cliona californiana de Laubenfels, 1932. Yellow boring sponge.
Cliona celata var. *californiana* de Laubenfels 1932; *Pseudosuberites pseudos* Dickinson 1945.
Type locality: Northern California. Distribution: Eastern Bering Sea to northern Mexico; intertidal zone to 120 m.

Order Polymastiida

Family Polymastiidae

Polymastia andrica de Laubenfels, 1949.
Polymastia mammilaris Lambe 1896.
Type locality: Gulf of St. Lawrence. Distribution: Point Barrow, Alaska (Beaufort Sea); western North Atlantic; depth unknown.

Polymastia fluegeli Lehnert, Stone and Heimler, 2005.
Type locality: South of Tanaga Island, central Aleutian Islands. Distribution: Known only from type locality; 81–338 m; common.

Polymastia kurilensis Koltun, 1962.
Type locality: Kuril Islands, Russia. Distribution: Eastern Bering Sea to the Gulf of Alaska; Kuril Islands; Okhotsk Sea; 50–301 m.

Polymastia pachymastia de Laubenfels, 1932. Aggregated nipple or many nipples sponge.
Type locality: Northern California. Distribution: Eastern Bering Sea to southern California; intertidal zone to at least 55 m.

Polymastia pacifica Lambe, 1893. Aggregated vase or western nipple sponge.
Suberites pacifica (Lambe 1893).
Type locality: Vancouver Island, British Columbia. Distribution: Aleutian Islands to California; intertidal zone to 183 m; uncommon.
Remarks: Records from the Aleutian Islands may not be this species (Austin et al., 2014).

Radiella sol Schmidt, 1870.
Polymastia sol (Schmidt 1870); *Trichostemma sol* (Schmidt 1870); *Suberites radians* Hansen 1885.

Type locality: Cuba. Distribution: Eastern Gulf of Alaska; Norway; Gulf of Mexico; Caribbean Sea; Greater Antilles; depth unknown.

Sphaerotylus raphidophora Austin, Ott, Reiswig, Romagosa, and McDaniel, 2014.

Type locality: Giacomini Seamount, Gulf of Alaska (56° 25.43′N, 146° 22.28′W). Distribution: Known only from the type locality; 862 m.

Order Tethyida

Family Tethyidae

Tethya californiana de Laubenfels, 1932. Orange rough ball sponge.

Tethya aurantia var. *californiana* de Laubenfels 1932.

Type locality: Pescadera Point, northern California. Distribution: Southern Alaska to northern Mexico; intertidal zone to 440 m.

Remarks: The only record we could find for this species occurring in Alaskan waters is in Lamb and Hanby (2005).

Order Suberitida

Family Suberitidae

Aaptos kanuux Lehnert, Hocevar and Stone, 2008.

Type locality: Pribilof Canyon, eastern Bering Sea. Distribution: Known only from type locality; 203–240 m; common.

Pseudosuberites montiniger (Carter, 1880). Peach ball sponge.

Suberites montiniger Carter 1880; *Hymeniacidon gorbunovi* (Rezvoj 1931).

Type locality: Barents Sea. Distribution: Eastern Gulf of Alaska (Cross Sound); eastern Bering Sea; Arctic Canada; Greenland; European waters; Kamchatka; Arctic Russia; Sea of Okhotsk; to a depth of 196 m.

Rhizaxinella cervicornis Thiele, 1898.

Type locality: Japan. Distribution: Eastern Gulf of Alaska; Japan; 418–544 m.

Rhizaxinella clavata Thiele, 1898.

Type locality: Sea of Japan. Distribution: Eastern Bering Sea (Zhemchug Canyon); Japan; 183–915 m; uncommon.

Suberites concinnus Lambe, 1895.

Type locality: Arctic Canada. Distribution: Chukchi Sea; eastern Bering Sea; Gulf of Alaska south to southern British Columbia; Sea of Okhotsk; 3–118 m.

Remarks: Some researchers believe this species is a junior synonym of *Pseudosuberites montiniger* (Carter, 1880).

Suberites excellens (Thiele, 1898).

Rhizaxinella excellens Thiele 1898.

Type locality: Sagami Bay, Japan. Distribution: Eastern Bering Sea (Zhemchug Canyon) and eastern Gulf of Alaska; Japan; Korea; 390–601 m; rare.

Suberites latus Lambe, 1893. Hermit sponge.

Suberites latus Lambe 1893; *Choanites suberea* var. *lata*: De Laubenfels 1961.

Type locality: British Columbia. Distribution: Eastern Bering Sea to southern California; intertidal zone to 183 m; common.

Suberites montalbidus Carter, 1880.

Type locality: Barents Sea. Distribution: Arctic Alaska; Arctic Canada; Siberia; Bering Sea; eastern Aleutian Islands; European waters; 20–100 m.

Suberites simplex Lambe, 1893.

Type locality: Vancouver Island, British Columbia. Distribution: Central Aleutian Islands; Vancouver Island; 73–160 m; uncommon.

Suberites suberia (Montagu, 1818).

Spongia suberia Montagu 1818; *Ficulina suberea* (Montagu 1818); *Halichondria suberea* (Montagu 1818); *Halichondria suberia* (Montagu 1818); *Hymeniacidon suberea* (Montagu 1818).

Type locality: United Kingdom. Distribution: Bering Sea; Gulf of Alaska; European waters; North Sea; depth unknown.

Suberites virgultosus (Johnston, 1842).

Halichondria virgultosus Johnston 1842; *Hymeniacidon virgultosa* (Johnston 1842); *Suberites luetkeni* Schmidt 1870; *Choanites luetkeni* (Schmidt 1870); *Ficulina luetkeni* (Schmidt 1870).

Type locality: Great Britain. Distribution: Arctic Alaska; Denmark; North Sea; European waters; depth unknown.

Suberites* sp. *sensu Stone, Lehnert and Reiswig, 2011.

Distribution: Eastern Bering Sea to Southeast Alaska; 20–165 m; abundant.

Remarks: This species is indistinguishable from *S. domuncula* that is common to the Mediterranean Sea and Atlantic Ocean, but the species assignment is undecided and this species complex is in need of a revision.

Family Halichondriidae

Halichondria (Halichondria) colossea Lundbeck, 1902.

Type locality: Denmark Strait. Distribution: Bering Sea (Pribilof Canyon); Iceland; east Greenland; 300–1039 m; rare.

Halichondria (Halichondria) lambei Brøndsted, 1933.

Type locality: Greenland. Distribution: Point Barrow, Alaska (Beaufort Sea); Arctic Canada; North Atlantic; depth >80 m.

Halichondria (Halichondria) oblonga (Hansen, 1885). Ginseng sponge.

Reniera oblonga Hansen 1885; *Haliclona oblonga* (Hansen 1885).

Type locality: Norway and Finnmark. Distribution: Central Aleutian Islands; Barents and Kara seas; Greenland and the Faroe Islands; 18–823 m; abundant.

Halichondria (Halichondria) panicea (Pallas, 1766). Yellow-green encrusting or crumb of bread sponge.

Spongia panicea Pallas 1766; *Alcyonium paniceum* (Pallas 1766); *Spongia tomentosa* Linnaeus 1767; *Spongia cristata* Ellis and Solander 1786; *Spongia tubulosa* Ellis and Solander 1786; *Spongia urens* Ellis and Solander 1786; *Alcyonium manusdiaboli sensu* Esper 1794; *Spongia compacta* Sowerby 1806; *Alcyonium medullare* Lamarck 1815; *Spongia albescens* Rafinesque 1818; *Halichondria albescens* (Rafinesque 1818); *Spongia seriata* Grant 1826; *Clathria (Microciona) seriata* (Grant 1826); *Clathria seriata* (Grant 1826); *Halichondria sevosa* Johnston 1842; *Halichondria reticulata* Lieberkühn 1859; *Halichondria coccinea* Bowerbank 1861; *Hymeniacidon coccinea* (Bowerbank 1861); *Hymeniacidon brettii* Bowerbank 1866; *Halichondria brettii* (Bowerbank 1866); *Halichondria caduca* Bowerbank 1866; *Halichondria glabra* Bowerbank 1866; *Halichondria incerta* Bowerbank 1866; *Hymeniacidon fallaciosus* Bowerbank 1866; *Hymeniacidon fragilis* Bowerbank 1866; *Hymeniacidon lactea* Bowerbank 1866; *Hymeniacidon membrane* Bowerbank 1866; *Hymeniacidon reticulatus* Bowerbank 1866; *Hymeniacidon thomasii* Bowerbank 1866; *Hymeniacidon parfitti* Parfitt 1868; *Pellina bibula* Schmidt 1870; *Spuma borealis* var. *convoluta* Miklucho-Maclay 1870; *Spuma borealis* var. *tuberosa* Miklucho-Maclay 1870; *Spuma borealis* var. *velamentosa* Miklucho-Maclay 1870; *Halichondria ambigua* Bowerbank 1874; *Halichondria edusa* Bowerbank 1874; *Hymeniacidon firmus* Bowerbank 1874; *Halichondria firmus* (Bowerbank 1874); *Halichondria pannosus* Verrill 1874; *Hymeniacidon solida* Bowerbank 1874; *Hymeniacidon tegeticula* Bowerbank 1874; *Amorphina appendiculata* Schmidt 1875; *Eumastia appendiculata* (Schmidt 1875); *Amorphina paciscens* Schmidt 1875; *Halichondria coralloides* Bowerbank 1882; *Isodictya crassa* Bowerbank 1882; *Isodictya perplexa* Bowerbank 1882; *Microciona tumulosa* Bowerbank 1882; *Clathria (Microciona) tumulosa* (Bowerbank 1882); *Amorphina grisea* Fristedt 1887; *Halichondria grisea* (Fristedt 1887); *Menanetia minchini* Topsent 1896; *Halichondriella corticata* Burton 1931; *Trachyopsilla glaberrima* Burton 1931; *Halichondria topsenti* de Laubenfels 1936.

Type locality: Celtic seas (Ireland, Westport Bay). Distribution: Cosmopolitan, including Chukchi and eastern Bering seas to northern Mexico; intertidal zone to 100 m; common.

Halichondria (Eumastia) sitiens (Schmidt, 1870). Breast sponge.

Eumastia sitiens Schmidt 1870; *Halichondria sitiens* (Schmidt 1870); *Pellina sitiens* (Schmidt 1870); *Spuma borealis* Miklucho-Maclay 1870; *Spuma borealis* var. *papillosa* Miklucho-Maclay 1870; *Halichondria borealis* (Miklucho-Maclay 1870); *Halichondria borealis* var. *papillosa* (Miklucho-Maclay 1870); *Amorphina nodosa* Fristedt 1887; *Halichondria nodosa* (Fristedt 1887); *Cioxeamastia polycalypta* de Laubenfels 1942.

Type locality: North Atlantic. Distribution: Central Aleutian Islands; Pribilof Canyon, Bering Sea; Arctic Ocean; North Atlantic; 6–300 m; common.

Halichondria* sp. *sensu Stone, Lehnert and Reiswig, 2011.

Distribution: Aleutian Islands; Pribilof Canyon, Bering Sea; eastern Gulf of Alaska; 71–309 m; abundant.

Hymeniacidon assimilis (Levinsen, 1887).

Halichondria assimilis Levinsen 1887.

Type locality: Kara Sea. Distribution: Chukchi and Bering seas; central Aleutian Islands; Sea of Okhotsk and Sea of Japan; Barents, East Siberian, and Kara seas; North Atlantic; 15–253 m; common.

Topsentia disparilis (Lambe, 1893).

Halichondria disparilis Lambe 1893.

Type locality: Gulf of Georgia, Vancouver Island, British Columbia. Distribution: Eastern Bering Sea; central Aleutian Islands; Point Barrow, Alaska (Beaufort Sea); Vancouver Island; 80–2828 m; uncommon.

Family Stylocordylidae

Stylocordyla borealis eous Koltun, 1966.

Type locality: Sea of Okhotsk. Distribution: Eastern Bering Sea (Pribilof Canyon); central Aleutian Islands; 125–307 m.

Order Haplosclerida

Family Callyspongiidae

Callyspongia (Callyspongia) mucosa Lehnert and Stone, 2013.

Type locality: 8.8 km south of Orient Point, Little Kiska Island,western Aleutian Islands, Alaska (51°52.29′N, 177°43.26′E). Distribution: Western and Central Aleutian Islands, Alaska; 84–106 m.

Family Chalinidae

Cladocroce attu Lehnert and Stone, 2013.

Type locality: 25.7 km west southwest of Cape Wrangell, Attu Island, western Aleutian Islands, Alaska (52°49.07′N, 172°06.08′E). Distribution: Known only from type locality; 358 m.

Cladocroce infundibulum Lehnert and Stone, 2013.

Type locality: Stalemate Bank, 97.6 km west of Cape Wrangell, Attu Island, western Aleutian Islands, Alaska (52°56.22′N, 170°59.29′E). Distribution: Known only from type locality; 185 m.

Cladocroce kiska Lehnert and Stone, 2013.

Type locality: 11.1 km southeast of Vega Point, Kiska Island, western Aleutian Islands, Alaska (51°46.37′N, 177°27.45′E). Distribution: Western and central Aleutian Islands; 84–255 m.

Cladocroce toxifera Lehnert and Stone, 2014.

Type locality: South of Sedanka Island, east of Unalaska Island, eastern Aleutian Islands; Gulf of Alaska (53°36.6378′N, 166°12.4800′W). Distribution: Known only from type locality; 93 m.

Cladocroce ventilabrum (Fristedt, 1887).

Reniera ventilabrum Fristedt 1887; *Haliclona ventilabrum* (Fristedt 1887).

Type locality: Greenland Sea. Distribution: Central Aleutian Islands; Sea of Japan; Barents and Greenland seas; Davis Strait; 40–718 m; uncommon.

Haliclona bucina Tanita and Hoshino, 1989.

Type locality: Sagami Bay, Japan. Distribution: Central Aleutian Islands; Japan; 80–145 m; rare.

?Haliclona (Reniera) cinerea (Grant, 1826).

Spongia cacellata Sowerby 1806; *Spongia cinerea* Grant 1826; *Adocia cinerea* (Grant 1826); *Halichondria cinerea* (Grant 1826); *Isodictya cinerea* (Grant 1826); *Reniera cinerea* (Grant 1826); *Halichondria montaguii* Fleming 1828; *Chalina montaguii* (Fleming 1828); *Chalinula montagui* (Fleming 1828); *Chalina flemingii* Bowerbank 1866; *Isodictya elegans* Bowerbank 1866; *Haliclona elegans* (Bowerbank 1866); *Reniera elegans* (Bowerbank 1866); *Isodictya dichotoma* Bowerbank 1866; *Isodictya mammeata* Bowerbank 1866; *Isodictya peachii* Bowerbank 1866; *Reniera peachi* (Bowerbank 1866); *Isodictya permollis* Bowerbank 1866; *Haliclona permollis* (Bowerbank 1866); *Reniera permollis* (Bowerbank 1866); *Reniclona permollis* (Bowerbank 1866); *Isodictya ramusculus* Bowerbank 1866; *Isodictya simulo* Bowerbank 1866; *Isodictya varians* Bowerbank 1866; *Philotia varians* (Bowerbank 1866); *Isodictya bowerbanki* Norman in Bowerbank 1882; *Haliclona (Reniera) bowerbanki* (Bowerbank 1882); *Reniera bowerbanki* (Bowerbank 1882).

Type locality: Fowey, United Kingdom. Distribution: Widely distributed in the Northern Hemisphere, including southern Alaska to southern California; intertidal zone to 6 m.

Haliclona (Gellius) digitata (Koltun, 1958).

Gellius digitatus Koltun 1958.

Type locality: Sea of Okhotsk. Distribution: Central Aleutian Islands; Kuril Islands; 96–287 m; uncommon.

Haliclona (Gellius) primitiva (Lundbeck, 1902).

Gellius primitivus Lundbeck 1902.

Type locality: Julianehaab, Greenland. Distribution: Eastern Bering Sea; central Aleutian Islands; seas of Okhotsk and Japan; Kuril Islands; White Sea; Greenland; 27–200 m; uncommon.

Haliclona (Rhizoniera) rufescens (Lambe, 1893).

Reniera rufescens Lambe 1893.

Type locality: Petropavlovsk, Kamchatka. Distribution: Eastern Bering Sea; Gulf of Alaska; Kamchatka Shelf; Gulf of St. Lawrence; eastern Scotian Shelf; depth unknown.

Haliclona tenuiderma (Lundbeck, 1902).

Halichondria tenuiderma Lundbeck 1902.

Type locality: Near Iceland. Distribution: Central Aleutian Islands; seas of Okhotsk and Japan; Barents and Greenland seas; North Atlantic; 0–1706 m; rare.

Haliclona (Haliclona) urceolus (Rathke and Vahl, 1806).

Spongia urceolus Rathke and Vahl 1806; *Adocia urceolus* (Rathke and Vahl 1806); *Reniera urceolus* (Rathke and Vahl 1806); *Isodictya clava* Bowerbank 1866; *Haliclona clava* (Bowerbank 1866); *Chalina pulcherrima* Fristedt 1885; *Haliclona pulcherrima* (Fristedt 1885); *Reniera simplex* Hansen 1885; *Reniera clavata* Levinsen 1887; *Haliclona clavata* (Levinsen 1887); *Polysiphonia mucronalis* Levinsen 1893.

Type locality: North Sea. Distribution: Central Aleutian Islands; Kara Sea; North Sea; 5–1000 m; uncommon.

Haliclona* sp. 1 *sensu Stone, Lehnert and Reiswig, 2011.

Distribution: Eastern Bering Sea and central Aleutian Islands; 150–160 m; uncommon.

Haliclona* sp. 2 *sensu Stone, Lehnert and Reiswig, 2011.

Distribution: Central Aleutian Islands; 74–195 m; abundant.

Family Niphatidae

Hemigellius porosus (Fristedt, 1887).

Desmacella porosa Fristedt 1887; *Sigmadocia porosa* (Fristedt 1887).

Type locality: Davis Strait, North Atlantic. Distribution: Eastern Bering Sea (Zhemchug Canyon); Sea of Japan and Sea of Okhotsk; Barents, Kara, and Laptev seas; west of Spitsbergen; east of Greenland; Denmark Strait; Davis Strait; Gulf of St. Lawrence, between Iceland and the Faroe Islands; 68–909 m; uncommon.

Family Petrosiidae

Petrosia (Petrosia) borealis (Lambe, 1895).

Toxochalina borealis Lambe 1895.

Type locality: Kiska Harbor, Alaska. Distribution: Western Aleutian Islands; depth unknown.

Xestospongia hispida (Ridley and Dendy, 1886). Hard gnarled clump sponge.

Petrosia hispida Ridley and Dendy 1886; *Haliclona hispida* (Ridley and Dendy 1886).

Type locality: Royal Sound, Kerguelen. Distribution:

Gulf of Alaska to northern Mexico; Namibia, Southwest Africa; Antarctic; type material was collected at 46 m.

Order Poecilosclerida

Family Acarnidae

Acarnus erithacus de Laubenfels, 1927. Thick encrusting scarlet sponge.

Type locality: Northern California. Distribution: Southern Alaska to northern Mexico; intertidal zone to 700 m.

Cornulum clathriata (Koltun, 1955).

Melonchela clathriata Koltun 1955.

Type locality: Near the Commander Islands in the western Bering Sea. Distribution: Central Aleutian Islands; Commander Islands; 843–2440 m.

Cornulum globosum Lehnert and Stone, 2015.

Type locality: South of Yunaska Island, eastern Aleutian Islands, North Pacific Ocean (52°17.3400′N, 170°48.2340′W). Distribution: Known only from type locality; 226 m.

?Iophon lamella Wilson, 1904. White reticulated sponge.

Burtonella melanokhemia de Laubenfels 1928; *Iophon chelifer* var. *californiana* de Laubenfels 1932.

Type locality: Galapagos Islands. Distribution: Gulf of Alaska to northern Mexico; 3–30 m.

Iophon piceum (Vosmaer, 1882).

Alebion piceum Vosmaer 1882; *Esperella picea* (Vosmaer 1882); *Esperia pattersoni sensu* Fristedt 1887.

Type locality: Barents Sea. Distribution: Central Aleutian Islands; Sea of Japan and Sea of Okhotsk; White and Kara seas; Greenland Sea; Norwegian Sea; Davis Strait; Denmark Strait; 9–1785 m; common.

Iophon piceum abipocillus Koltun, 1959.

Type locality: Sea of Okhotsk. Distribution: Central Aleutian Islands; 82–1240 m; uncommon.

Megaciella anisochela Lehnert, Stone and Heimler, 2006.

Type locality: Amchitka Pass, central Aleutian Islands. Distribution: Known only from type locality; 702–750 m; abundant.

Megaciella lobata Lehnert and Stone, 2015.

Type locality: North of western Kiska Island, western Aleutian Islands, Bering Sea (51°59.5740′N, 177°23.0100′E). Distribution: Known only from type locality; 91 m.

Megaciella pituitosa Lehnert and Stone, 2014.

Type locality: Stalemate Bank, western Aleutian Islands; North Pacific Ocean (52°58.6206′N, 170°57.4524′E). Distribution: Aleutian Islands from Stalemate Bank to Kanaga Pass; 127–176 m.

Megaciella spirinae (Koltun, 1958).

Myxichela spirinae Koltun 1958.

Type locality: Eastern Tartar Strait, near the Pacific Coast of the southern Kuril Islands. Distribution: Central Aleutian Islands; 71–414 m; uncommon.

Megaciella triangulata Lehnert and Stone, 2015.

Type locality: Buldir Reef, western Aleutian Islands, North Pacific Ocean (52°03.4140′N, 176°25.0800′E). Distribution: Known only from type locality; 141 m.

Wigginsia wigginsi de Laubenfels, 1953.

Plocamia fragilis Koltun 1959; *Antho fragilis* (Koltun 1959); *Plocamionida fragilis* (Koltun 1959).

Type locality: Chukchi and Beaufort seas (Arctic Alaska). Distribution: Arctic Alaska; Sea of Okhotsk; Arctic Russia; European waters; 143 m.

Family Microcionidae

Artemisina amlia Lehnert, Stone and Heimler 2006.

Type locality: Central Aleutian Islands. Distribution: Known only from type locality; 97–253 m; common.

Artemisina arcigera (Schmidt, 1870).

Suberites arciger Schmidt 1870; *Artemisina suberitoides* Vosmaer 1885.

Type locality: North coast of Norway (Barents Sea). Distribution: Central Aleutian Islands; Barents, White, and Kara seas; Greenland Sea; Island of Spitsbergen; Norwegian Sea; Denmark Strait; Davis Strait; 14–1000 m; common.

Artemisina clavata Lehnert and Stone, 2015.

Type locality: Southeast of Vega Point, south Kiska Island, western Aleutian Islands, North Pacific Ocean (51°46.3740′N, 177°27.4560′E). Distribution: Western Aleutian Islands; 228–262 m.

Artemisina flabellata Lehnert and Stone, 2015.

Type locality: Petrel Bank, central Aleutian Islands, Bering Sea (52°15.9960′N, 179°54.0060′E). Distribution: Known only from type locality; 99 m.

Artemisina stipitata Koltun 1958.

Type locality: Southern Kuril Strait. Distribution: Central Aleutian Islands; Arctic Russia; 80–239 m; abundant.

Artemisina* sp. *sensu Stone, Lehnert and Reiswig, 2011.

Central Aleutian Islands; Arctic Ocean (Barents, Greenland, Kara, and Laptev seas); 18–380 m; abundant.

Remarks: This species is very similar to *A. apollinis* (described from the Kerguelen Islands) but its conspecificity is unlikely. It is also very similar to *Mycale loveni* with which it co-occurs.

Clathria (Clathria) barleei (Bowerbank, 1866).

Isodictya barleei Bowerbank 1866; *Axinella barleei* (Bowerbank 1866); *Tragosia barleei* (Bowerbank 1866); *Isodictya foliata* Bowerbank in Norman 1869; *Isodictya laciniosa* Bowerbank in Norman 1869; *Amphilectus laciniosa* (Bowerbank in Norman 1869); *Clathria laciniosa* (Bowerbank in Norman 1869); *Amphilectus foliata* (Bowerbank 1874); *Artemisina foliata* (Bowerbank 1874); *Echinoclathria foliata* (Bowerbank 1874); *Esperia foliata* (Bowerbank 1874); *Esperiopsis foliata* (Bowerbank 1874); *Homoeodictya foliata* (Bowerbank 1874); *Halichondria mutula* Bowerbank 1874; *Rhaphidophlus filifer* var. *cantabrica* Orueta 1901; *Clathria (Clathria) cantabrica* (Orueta 1901).

Type locality: Ireland. Distribution: Central Aleutian Islands; Barents Sea; Ireland; France; Norway; 72–440 m; uncommon.

Clathria (Clathria) laevigata Lambe, 1893.

Type locality: Vancouver Island, British Columbia. Distribution: Central Aleutian Islands; Kuril Strait; Vancouver Island; 72–167 m; common.

Clathria (Axosuberites) lambei (Koltun, 1955).

Microciona lambei Koltun 1955; *Clathria (Axociella) lambei* (Koltun 1955).

Type locality: Southern Kuril Islands. Distribution: Central Aleutian Islands; southern Sea of Okhotsk and Sea of Japan; 91–550 m; uncommon.

?***Clathria (Microciona) pennata*** (Lambe, 1895). Velvety red sponge.

Desmacella pennata Lambe 1895; *Ophlitaspongia pennata* (Lambe 1895); *Ophlitaspongia pennata* var. *californiana* de Laubenfels 1932; *Clathria (Microciona) pennata* var. *californiana* (de Laubenfels 1932).

Type locality: Sooke, Vancouver Island, British Columbia. Distribution: Southern Alaska to northern Mexico; intertidal zone to 90 m; common.

?***Clathria (Microciona) primitiva*** Koltun, 1955.

Microciona primitiva Koltun 1955.

Type locality: Medny Island, Commander Islands, Bering Sea. Distribution: ?Aleutian Islands; Kamchatka Shelf; depth unknown.

Echinoclathria beringensis (Hentschel, 1929).

Phakellia beringensis Hentschel 1929.

Type locality: St. Matthew Island, eastern Bering Sea, Alaska. Distribution: Eastern Bering Sea; Point Barrow, Arctic Alaska; 9–226 m.

Echinoclathria vasa Lehnert, Stone and Heimler, 2006.

Type locality: Amchitka Pass, central Aleutian Islands. Distribution: Known only from type locality; 622–876 m; common.

Family Coelosphaeridae

Coelosphaera (Histodermion) kigushimkada Lehnert and Stone, 2015.

Type locality: West of Cape Kigushimkada, Umnak Island, eastern Aleutian Islands, Bering Sea (53°07.0560′N, 168°58.4400′W). Distribution: Known only from type locality; 265 m.

Coelosphaera (Coelosphaera) oglalai Lehnert, Stone and Heimler, 2006.

Type locality: Central Aleutian Islands. Distribution: Known only from type locality; 100–155 m; uncommon.

Histodermella kagigunensis Lehnert, Stone and Heimler, 2013. Spud sponge.

Type locality: Southern Amchitka Pass, 26 km west-northwest of Amatignak Island, Delarof Islands, central Aleutian Islands (51°21.042′N, 179°30.483′W). Distribution: Aleutian Islands; Gulf of Alaska; 100–300 m; common.

Inflatella globosa Koltun, 1955.

Type locality: Sea of Okhotsk. Distribution: Central Aleutian Islands; Bering Sea near Medny Island (Commander Islands); western Sea of Okhotsk; Sea of Japan; 6–299 m; common.

Lissodendoryx (Lissodendoryx) amaknakensis (Lambe, 1895).

Myxilla amaknakensis Lambe 1895.

Type locality: Not specifically stated (Bering Sea and North Pacific Ocean as far south as Vancouver Island). Distribution: Eastern Bering Sea to Vancouver Island, British Columbia; depth unknown.

Lissodendoryx (Lissodendoryx) behringi Koltun, 1958.

Type locality: Kuril Islands. Distribution: Central Aleutian Islands; Bering Sea (Russia); Sea of Okhotsk; 87–220 m; uncommon.

Lissodendoryx (Lissodendoryx) firma (Lambe, 1895).

Myxilla firma Lambe 1895.

Type locality: Not specifically stated (Kiska Harbor, Kiska Island, Alaska, and Vancouver Island). Distribution: Western Aleutian Islands to Oregon; depth unknown.

Lissodendoryx (Ectyodoryx) olgae (Hentschel, 1929).

Type locality: Svalbard, south of Bear Island. Distribution: Central Aleutian Islands; western Barents Sea; Norway; 130–210 m; uncommon.

Lissodendoryx (Lissodendoryx) oxeota Koltun, 1958.

Type locality: Sea of Okhotsk. Distribution: Central Aleutian Islands; Sea of Okhotsk; 100–955 m; rare.

Lissodendoryx (Lissodendoryx) papillosa Koltun, 1958.

Type locality: Sea of Okhotsk. Distribution: Eastern Bering Sea (Zhemchug Canyon); Sea of Okhotsk; 911 m; rare.

Family Crambeidae

Monanchora alaskensis (Lambe, 1895).

Chondrocladia alaskensis Lambe 1895; *Amorphoclada alaskensis* (Lambe 1895); *Stelodoryx alaskensis* (Lambe 1895).

Type locality: Bering Sea and North Pacific Ocean. Distribution: Central Aleutian Islands; eastern Bering Sea; western Bering Sea (Russia); Sea of Okhotsk; 32–364 m; uncommon.

Monanchora laminachela Lehnert, Stone and Heimler, 2006.

Type locality: South of Tanaga Island, central Aleutian Islands. Distribution: Known only from type locality; 203–485 m; common.

Monanchora pulchra (Lambe, 1895). Leafy yellow sponge.

Chondrocladia pulchra Lambe 1895.

Type locality: Aleutian Islands. Distribution: British Columbia; Kuril Islands; 79–330 m; abundant.

Family Crellidae

Crella brunnea (Hansen, 1885).

Myxilla brunnea Hansen 1885.

Type locality: Norwegian Sea. Distribution: Central Aleutian Islands; Barents, White, and Kara seas; Denmark Strait; Davis Strait; 20–300 m; uncommon.

Family Hymedesmiidae

Hymedesmia (Stylopus) dermata Lundbeck, 1910.

Ectyostylopus dermata (Lundbeck 1910).

Type locality: Between Faroe Islands and Iceland. Distribution: Aleutian Islands; Barents, Laptev, and Kara seas; Greenland Sea. 91–410 m; uncommon.

Hymedesmia (Hymedesmia) irregularis Lundbeck, 1910.

Type locality: Southwest of Iceland near the Faroe Islands. Distribution: Eastern Bering Sea (Pribilof Canyon); White Sea; Davis and Denmark straits; 293–1441 m; uncommon.

Hymedesmia (Stylopus) longurius Lundbeck, 1910.

Type locality: North Atlantic. Distribution: Aleutian Islands; Greenland; Iceland; North Sea; European waters; depth unknown.

Kirkpatrickia borealis Koltun, 1970.

Type locality: Shikotan Island, Kuril Islands. Distribution: Central Aleutian Islands; western North Pacific; 82–479 m; common.

Phorbas paucistylifer Koltun, 1958.

Type locality: Sea of Okhotsk. Distribution: Central Aleutian Islands; Sea of Japan; 3–414 m; common.

Family Iotrochotidae

Iotroata magna (Lambe, 1900).

Iotrochota magna Lambe 1900.

Type locality: Aleutian Islands. Distribution: Aleutian Islands; depth unknown.

Family Myxillidae

Melonanchora globogilva Lehnert, Stone and Heimler, 2006.

Type locality: Central Aleutian Islands. Distribution: Known only from type locality; 173–190 m; rare.

Myxilla (Myxilla) barentsi Vosmaer, 1885.

Type locality: Barents Sea. Distribution: Bering Sea; Gulf of Alaska; Norway; Finnmark; European waters; depth unknown.

Myxilla (Myxilla) behringensis Lambe, 1895.

Type locality: Vancouver Island, British Columbia. Distribution: Eastern Bering Sea; central Aleutian Islands; Sea of Okhotsk; Sea of Japan; 32–195 m; rare.

Remarks: Epizoic on the demosponge *Halichondria oblonga.*

Myxilla (Myxilla) incrustans (Johnston, 1842). Rough scallop sponge.

Halichondria incrustans Johnston 1842; *Amphilectus incrustans* (Johnston 1842); *Dendoryx incrustans* (Johnston 1842); *Halichondria candida* Bowerbank 1866; *Myxilla gigas* Merejkowsky 1879.

Type locality: Firth of Forth (eastern North Atlantic). Distribution: Arctic Ocean to southern California; Japan; North Atlantic; Mediterranean Sea; subtidal zone; common.

Myxilla (Burtonanchora) lacunosa Lambe, 1893. Sulphur or yellow encrusting sponge.

Type locality: British Columbia. Distribution: Eastern Bering Sea to southern British Columbia; below 10 m.

Myxilla (Ectyomyxilla) parasitica Lambe, 1893.

Type locality: Vancouver Island, British Columbia. Distribution: Aleutian Islands; Bering Sea (Russia); Sea of Okhotsk; British Columbia; 15–250 m; abundant.

Remarks: Encrusting on the shells of scallops (*Chlamys* sp.).

Myxilla (Burtonanchora) pedunculata Lundbeck, 1905.

Type locality: Iceland and Faroe Islands. Distribution: Eastern Bering Sea (Pribilof Canyon); Kara and Laptev seas; North Atlantic; 28–325 m; uncommon.

Stelodoryx mucosa Lehnert and Stone, 2015.

Type locality: Stalemate Bank, western Aleutian Islands, North Pacific Ocean (52°59.0760′N, 170°55.5780′E). Distribution: Known only from type locality; 127 m.

Stelodoryx oxeata Lehnert, Stone and Heimler, 2006.
Type locality: Central Aleutian Islands. Distribution: Known only from type locality; 175–712 m; uncommon.

Stelodoryx siphofuscus Lehnert and Stone, 2015.
Type locality: Southeast of Concord Point, Chuginadak Island, Islands of Four Mountains, Samalga Pass, North Pacific Ocean (52°46.3500′N, 169°40.0200′W). Distribution: Known only from type locality; 144 m.

Stelodoryx toporoki Koltun, 1958.
Type locality: Sea of Okhotsk. Distribution: Central Aleutian Islands; Arctic Russia; Kuril Islands; 113–2314 m; common.

Stelodoryx vitiazi (Koltun, 1955).
Pseudomyxilla vitiazi Koltun 1955.
Type locality: Sea of Okhotsk. Distribution: Central Aleutian Islands; Bering Sea (near the Commander Islands); 115–1009 m; common.

Family Phellodermidae

Echinostylinos hirsutus Koltun, 1970.
Type locality: Sea of Okhotsk. Distribution: Central Aleutian Islands; 665–1540 m; rare.

Family Tedaniidae

Tedania (Tedania) dirhaphis Hentschel, 1912.
Type locality: Indonesia. Distribution: Central Aleutian Islands; eastern Bering Sea (Pribilof Canyon); Sea of Okhotsk; Kuril Islands; South China Sea; 4–550 m; uncommon.

Tedania (Tedania) fragilis Baer, 1906.
Tedania digitata var. *fragilis* Baer 1906.
Type locality: East Africa. Distribution: Eastern Aleutian Islands to Washington; western North Pacific; shallow.

Tedania kagalaskai Lehnert, Stone and Heimler, 2006.
Type locality: Central Aleutian Islands. Distribution: Known only from type locality; 59–478 m; common.

Family Cladorhizidae

Abyssocladia bruuni Lévi, 1964.
Phelloderma bruuni (Lévi 1964).
Type locality: Kermadec Trench. Distribution: Southern Gulf of Alaska; South Pacific; depth unknown.

Asbestopluma occidentalis (Lambe, 1893).
Esperella occidentalis Lambe 1893.
Type locality: British Columbia. Distribution: Eastern Bering Sea to Washington; depth unknown.

Asbestopluma ramosa Koltun, 1958.
Type locality: Kuril Islands. Distribution: Central Aleutian Islands; eastern Gulf of Alaska; Vancouver Island; Barents, Kara, Laptev, East Siberian, and Greenland seas; Faroe Islands; 41–1812 m; abundant.

Chondrocladia (Chondrocladia) concrescens (Schmidt, 1880).
Cladorhiza concrescens Schmidt 1880.
Type locality: Gulf of Mexico. Distribution: Central Aleutian Islands; Sea of Okhotsk, Kuril Islands; Greenland Sea; Norwegian Sea; 200–8660 m; common.

?Chondrocladia gigantea (Hansen, 1885). Carnivorous cat-tail sponge or giant clubsponge.
Desmacidon gigantea Hansen 1885; *Desmacidon clavata* Hansen 1885.
Type locality: Norway. Distribution: Circumboreal, south to the Aleutian Islands; 230–3000 m.
Remarks: A species resembling *Chondrocladia* from the Aleutian Islands has been identified as *C. gigantea* (Clark, 2006). The identification remains tentative.

Chondrocladia (Meliiderma) occulta (Lehnert, Stone and Heimler, 2006).
Latrunculia occulta Lehnert, Stone and Heimler 2006.
Type locality: South of Tanaga Island, Aleutian Islands. Distribution: Known only from type locality; depth >80 m.

Cladorhiza bathycrinoides Koltun, 1955.
Type locality: Sea of Okhotsk. Distribution: Central Aleutian Islands; Russia; 150–3800 m; common.

Cladorhiza corona Lehnert, Watling and Stone, 2005.
Type locality: Amchitka Pass, central Aleutian Islands. Distribution: Central Aleutian Islands; 726–2077 m; common.

Cladorhiza longipinna Ridley and Dendy, 1886.
Type locality: Hawaii. Distribution: Southern Alaska; deep water.

Family Guitarridae

Euchelipluma elongata Lehnert, Stone and Heimler, 2006.
Type locality: South of Amlia Island, central Aleutian Islands. Distribution: Central Aleutian Islands; 1525–2200 m; abundant.

Guitarra abbotti Lee, 1987.
Type locality: Cordell Bank, San Francisco, California. Distribution: Central Aleutian Islands; San Franciso; 35–146 m; common.

Guitarra fimbriata Carter, 1874.
Type locality: British Isles. Distribution: Cosmopolitan, including the Aleutian Islands; 28–188 m; common.

Family Esperiopsidae

Amphilectus digitatus (Miklucho-Maclay, 1870). Glove sponge.

Velusa polymorpha var. *digitata* Miklucho-Maclay 1870; *Veluspa digitata* Miklucho-Maclay 1870; *Esperiopsis digitata* (Miklucho-Maclay 1870); *Neoesperiopsis digitata* (Miklucho-Maclay 1870).

Type locality: Russian Arctic. Distribution: Central Aleutian Islands and eastern Gulf of Alaska; Bering Sea; British Columbia; Kamchatka Coast; Chukchi Sea; East Siberian Sea; 9–291 m; common.

Amphilectus lobatus (Montagu, 1818).

Spongia lobata Montagu 1818; *Corybas lobatus* (Montagu 1818); *Esperiopsis lobata* (Montagu 1818); *Isodictya lobata* (Montagu 1818); *Mycale lobata* (Montagu 1818); *Isodictya clarkei* Bowerbank 1866; *Esperiopsis clarkei* (Bowerbank 1866); *Chalinula ovulum* Schmidt 1870; *Mycale ovulum* (Schmidt 1870); *Mycalecarmia ovulum* (Schmidt 1870); *Esperia lanugo* Schmidt 1875; *Mycale lanugo* (Schmidt 1875).

Type locality: Devon coast, England. Distribution: Boreal-Arctic; littoral zone to 200 m.

Esperiopsis flagrum Lehnert, Stone and Heimler, 2006.

Type locality: Amchitka Pass, Aleutian Islands. Distribution: Central Aleutian Islands; 700–1389 m; common.

Semisuberites cribrosa (Miklucho-Maclay, 1870).

Veluspa polymorpha var. *cribrosa* Miklucho-Maclay 1870; *Veluspa polymorpha* var. *flabelliformis* Miklucho-Maclay 1870; *Veluspa polymorpha* var. *infundibuliformis* Miklucho-Maclay 1870; *Veluspa flabelliformis* Miklucho-Maclay 1870; *Haliclona flabelliformis* (Miklucho-Maclay 1870); *Phakellia cribrosa* (Miklucho-Maclay 1870); *Phakettia cribrosa* (Miklucho-Maclay 1870); *Stylissa cribrosa* (Miklucho-Maclay 1870); *Semisuberites arctica* Carter 1877; *Auletta elegans* Vosmaer 1882; *Siphonocalypta elegans* (Vosmaer 1882); *Cribrochalina sluiteri* Vosmaer 1882; *Stylaxia sluiteri* (Vosmaer 1882); *Tragosia sluiteri* (Vosmaer 1882); *Cribrochalina variabilis* Vosmaer 1882; *Cribrochalina variabilis* var. *crassa* Vosmaer 1882; *Cribrochalina variabilis* var. *salpingoides* Vosmaer 1882; *Axinella variabilis* (Vosmaer 1882); *Stylaxia variabilis* (Vosmaer 1882); *Reniera infundibuliformis*: Hansen 1885; *Stylissa stipitata* de Laubenfels 1961.

Type locality: Russian Arctic. Distribution: Central Aleutian Islands; Bering Sea (Zhemchug Canyon); Gulf of Alaska; north and east coasts of Russia (Bering and Chukchi seas); Greenland Sea; Norwegian Sea; 14–325 m; uncommon.

Family Mycalidae

Mycale (Aegogropila) adhaerens (Lambe, 1893). Smooth scallop sponge.

Esperella adhaerens Lambe 1893.

Type locality: Elk Bay, Discovery Passage, Vancouver Island, British Columbia. Distribution: Central Aleutian Islands; Bering Sea; Sea of Okhotsk; Sea of Japan; Vancouver Island; Greenland Sea; intertidal zone to 442 m; common.

Remarks: This species encrusts all hard substrates including hydrocorals and other sedentary biota. It has been inaccurately reported as *Myxilla incrustans* (Stone, 2006).

Mycale (Carmia) carlilei Lehnert, Stone and Heimler, 2006.

Type locality: Central Aleutian Islands. Distribution: Central Aleutian Islands; 82–360 m; abundant.

Mycale (Carmia) helios (Fristedt, 1887).

Esperia helios Fristedt 1887.

Type locality: Pitlekai, Siberia. Distribution: Bering Sea; Arctic Ocean; Sea of Okhotsk; European waters; type material was collected at 22 m.

Mycale (Mycale) hispida (Lambe, 1893).

Esperella hispida Lambe 1893.

Type locality: Near Suquash, Queen Charlotte Sound, Vancouver Island, British Columbia. Distribution: Aleutian Islands and Gulf of Alaska to Washington; type material was collected at 46 m.

Mycale (Mycale) jasoniae Lehnert, Stone and Heimler, 2006.

Type locality: Amchitka Pass, central Aleutian Islands. Distribution: Central Aleutian Islands. 178–340 m; uncommon.

Mycale (Mycale) lingua (Bowerbank, 1866).

Hymeniacidon lingua Bowerbank 1866; *Esperella lingua* (Bowerbank 1866); *Esperia lingua* (Bowerbank 1866); *Raphiodesma lingua* (Bowerbank 1866); *Desmacidon constrictus* Bowerbank 1866; *Esperia constricta* (Bowerbank 1866); *Raphioderma coacervata* Bowerbank in Norman 1869; *Esperia lucifera* Schmidt 1873; *Esperia placoides* Carter 1876; *Mycale placoides* (Carter 1876); *Esperella vosmaeri* Levinsen 1887; *Mycale (Mycale) vosmaeri* (Levinsen 1887).

Type locality: Great Britain. Distribution: Widespread in the Northern Hemisphere, including the central Aleutian Islands; depth unknown.

Mycale (Mycale) loveni (Fristedt, 1887). Tree sponge.

Clathria loveni Fristedt 1887; *Esperia loveni* (Fristedt 1887); *Esperella bellabellensis* Lambe 1905; *Mycale bellabellensis* (Lambe 1905).

Type locality: Cape Jakan, northern Siberia coast. Distribution: Chukchi and Bering seas; Aleutian Islands; Gulf of Alaska; British Columbia; Sea of Okhotsk; Kuril Islands; East Siberian Sea; 56–744 m; abundant.

Mycale (Carmia) modesta (Lambe, 1895).

Esperella modesta Lambe 1895.

Type locality: Bering Sea and North Pacific Ocean. Distribution: Eastern Bering Sea; Aleutian Islands; Gulf of Alaska; Arctic Canada; depth unknown.

Mycale (Mycale) toporoki Koltun, 1958. Bristly yellow clump sponge.

Type locality: Kuril Islands. Distribution: Eastern Bering Sea to Washington; Japan; subtidal zone.

Mycale (Mycale) tylota Koltun, 1958.

Type locality: Kuril Strait. Distribution: Central Aleutian Islands; Kuril Islands; 73–181 m; common.

Family Isodictyidae

Isodictya quatsinoensis (Lambe, 1893).

Esperiopsis quatsinoensis Lambe 1893.

Type locality: Eastern Bering Sea. Distribution: Bering Sea to British Columbia; Arctic Canada; depth unknown.

Isodictya rigida (Lambe, 1893). Orange finger sponge.

Esperiopsis rigida Lambe 1893; *Neoesperiopsis rigida* (Lambe 1893).

Type locality: Entrance to Malaspina Inlet, mainland of British Columbia. Distribution: Eastern Bering Sea to British Columbia; 110–128 m.

Family Latrunculiidae

Latrunculia (Biannulata) oparinae Samaai and Krasokhin, 2002.

Type locality: Kuril Islands, Sea of Okhotsk. Distribution: Central Aleutian Islands; Kuril Islands; 79–288 m; common and abundant.

Latrunculia velera Lehnert, Stone and Heimler, 2006.

Type locality: Amchitka Pass, Aleutian Islands. Distribution: Central Aleutian Islands; 412–1009 m; common.

Latrunculia sp. *sensu* Stone, Lehnert and Reiswig, 2011.

Distribution: Eastern Gulf of Alaska; ?British Columbia; ?northern Washington; 69–210 m; common.

Order Axinellida

Family Axinellidae

Auletta krautteri Austin, Ott, Reiswit, Romagosa, and McDaniel, 2013.

Type locality: Hecate Strait, British Columbia. Distribution: Gulf of Alaska to the southern end of the Queen Charlotte Islands, British Columbia; 180–320 m.

Axinella blanca Koltun, 1959.

Type locality: Bering Sea near Medny Island (Commander Islands, Russia). Distribution: Central Aleutian Islands and Bering Sea; 80–269 m; abundant.

Axinella rugosa (Bowerbank, 1866).

Dictyocylindrus rugosus Bowerbank 1866; *Phakellia rugosa* (Bowerbank 1866); *Pseudaxinella sulcata* Schmidt 1875.

Type locality: Orkney and Shetland (eastern North Atlantic). Distribution: Eastern Gulf of Alaska; Sea of Japan; Barents Sea; Greenland Sea; Norwegian Sea; 87–712 m; abundant.

Family Raspaillidae

Raspailia (Hymeraphiopsis) septentrionalis Lehnert and Stone, 2015.

Raspailia (Hymeraphiopsis) fruticosa Lehnert and Stone 2015.

Type locality: Southeast of Fox Beach Point, Shemya Island, Semichi Islands, western Aleutian Islands, North Pacific Ocean (52°26.5920′N, 174°18.1740′E). Distribution: Known only from type locality; 228 m.

Order Bubarida

Family Bubaridae

Bubaris vermiculata (Bowerbank, 1866).

Hymeraphia vermiculata Bowerbank 1866; *Phakellia vermiculata* (Bowerbank 1866); *Microciona simplicissima* Norman 1869; *Microciona simplicima* Bowerbank 1874; *Bubaris simplicima* (Bowerbank 1874).

Type locality: Shetland. Distribution: Central Aleutian Islands; Barents Sea; Greenland Sea; Norwegian Sea to the Azores; Mediterranean Sea; 9–1360 m; common.

Order Biemnida

Family Biemnidae

Biemna rhadia de Laubenfels, 1930. Mounded nipple sponge.

Type locality: Northern California. Distribution: Eastern Bering Sea to northern Mexico; subtidal zone.

Biemna variantia (Bowerbank, 1858).

Halichondria variantia Bowerbank 1858; *Asychis variantia* (Bowerbank 1858); *Desmacella variantia* (Bowerbank 1858); *Hymeniacidon variantia* (Bowerbank 1858); *Desmacidon peachii* Bowerbank 1866; *Biemna peachii* (Bowerbank 1866); *Desmacidon korenii* Schmidt 1875; *Hymeniacidon varians* Bowerbank 1882; *Desmacella peachii* var. *stellifera* Fristedt 1885; *Desmacella groenlandica* Fristedt 1887; *Desmacella peachii* var. *groenlandica* Fristedt 1887; *Biemna groenlandica* (Fristedt 1887); *Gellius capillifer* Levinsen 1887; *Biemna capillifera* (Levinsen 1887); *Desmacella capillifer* (Levinsen 1887); *Raphiodesma aculeatum* Topsent 1888; *Desmacella hamifera* Lundbeck 1902; *Biemna hamifera* (Lundbeck 1902); *Biemna variantia hamifera* (Lundbeck 1905); *Gellius gemmuliferus* Breitfuss 1912; *Biemna gemmulifera* (Breitfuss 1912).

Type locality: Not traced. Distribution: Central Aleutian Islands; Bering Sea (Russia); Barents and Greenland seas; eastern Scotian Shelf east to Iceland and south to the Canary Islands; western Mediterranean Sea; 62–1800 m; uncommon.

Phylum Cnidaria

Class Hydrozoa—The Hydroids, Hydrocorals, and Siphonophores

The hydrozoans include the hydroids, hydrocorals, and siphonophores. Their life history includes the alternation of generations (asexual benthic polyps alternate with sexual planktonic medusae), with the polyp stage predominating (with some exceptions). About 3500 species are known worldwide (Schuchert, 2011), with approximately 175 species represented in Alaskan marine waters (Table 1). Most hydroids are difficult to identify and require microscopic examination while most hydrocorals can be identified to genus level in the field. Hydrocorals provide important habitat for many fish and invertebrate species. There are 247 stylasterid species known wordwide (Cairns, 2011b), with 25 species represented in Alaskan waters. Stylasterid diversity is highest in the western Pacific (particularly the southwest Pacific), and they are absent in the Pacific Arctic (Cairns, 2011b). The higher classification follows the Hydrozoa Directory (Schuchert, 2011). Several sources of primary and secondary literature were used to compile the information for the list of hydrozoans: Nutting (1899, 1901), Fraser (1937), Fisher (1938), Naumov (1960), Totton (1965), Kramp (1968), Arai and Brinckmann-Voss (1980), Jinbiao and Mao (2001), Wing and Barnard (2004), Schuchert (2005, 2007), Govindarajan et al. (2005, 2006), Mapstone and Arai (2009), and Cairns and Lindner (2011).

Order Anthoathecata

Suborder Capitata

Family Candelabridae

Monocoryne bracteata (Fraser, 1941).

Symplectanea bracteata Fraser 1941.

Type locality: Thistle Ledge, Stephens Pass, Alaska. Distribution: North Pacific (southeastern Alaska); 240 m.

Monocoryne colonialis Brinckmann-Voss and Lindner, 2008.

?*Monocoryne bracteata*: Stepanjants, Svoboda and Anokhin 2002, 2003 (in part: specimens from Kuril Islands); non *Symplectanea bracteata* Fraser 1941.

Type locality: Cape Moffet, Adak Island, Aleutian Islands. Distribution: Known from the type locality and possibly the Kuril Islands (Brinckmann-Voss and Linder, 2008); 200–300 m.

Family Corymorphidae

Branchiocerianthus imperator (Allman, 1885).

Monocaulus imperator Allman 1885.

Type locality: Yokohama, Japan. Distribution: Eastern North (Alaska) and western North (Japan) Pacific; Somalia; Mozambique; North Atlantic southwest of Ireland; 200–5304 m.

Corymorpha carnea (Clark, 1876).

Rhizonema carnea Clark 1876.

Type locality: Norton Sound, Alaska. Distribution: Known only from type locality; depth unknown.

Corymorpha groenlandica (Allman, 1876).

Monocaulus groenlandica Allman 1876; *Lampra purpurea* Bonnevie 1898; *Lampra atlantica* Bonnevie 1898; ?*Lampra sarsii* Bonnevie 1898; *Lampra socia* Swenander 1904; *Lampra arctica* Jaderholm 1907; *Corymorpha Spitsbergensis* Broch 1910; ?*Corymorpha abyssalis* Broch 1910; *Lampra socia*: Stechow 1912.

Type locality: Greenland. Distribution: Widespread in the Arctic, occurring as far south as the Faroe-Shetland Channel; Greenland; Iceland; Spitsbergen; Faroe and Shetland islands; northern Norway; Barents Sea; Laptev Sea; Beaufort Sea; Kurils; 36 m to more than 2000 m, mostly below 300 m; common.

Remarks: Calder (1972) believed that *Rhizonema carnea* Clark, 1877 from Alaska is possibly conspecific with *C. groenlandica*.

Euphysa flammea (Hartlaub, 1902).

Codonium princeps: Levinsen 1893 (in part); *Sarsia brachygaster* Gronberg 1898 (in part); ? (?*Syndiction*) *incertum* Linko 1900; *Sarsia flammea* Hartlaub 1902; *Tiara* spec: Maas 1904; *Pandea maasi* Mayer 1910; *Sarsia japonica*: Uchida 1927 (in part) [non *Euphysa japonica* (Maas 1909)]; *Sarsia japonica*: Kramp 1928 [non *Euphysa japonica* (Maas 1909)]; *Sarsia flammea*: Foerster 1923 (in part); *Corymorpha flammea*: Naumov 1969 (in part); non *Euphysa flammea*: Goy *et al.* 1991; non *Euphysa flammea*: Bouillon et al. 2004.

Type locality: Barents Sea. Distribution: Arctic circumpolar to northern boreal, reaching southwards to Newfoundland in the western Atlantic, to northern Norway in the eastern Atlantic, to Vancouver Island in the eastern Pacific, and to northern Japan in the western Pacific; 0–200 m; common.

Remarks: The polyp stage is unknown for this species. This species is likely to be confused with *E. japonica*, and thus might be present only in the Arctic and Atlantic oceans (Arai and Brinckmann-Voss, 1980).

Euphysa japonica (Maas, 1909).

Sarsia japonica Maas 1909.

Type locality: Japan. Distribution: Japan; eastern North Pacific; depth unknown.

Family Corynidae

Coryne brachiata Nutting, 1901.

Type locality: Yakutat Bay, Alaska. Distribution: Known only from type locality; depth unknown.

Coryne eximia Allman, 1859.

Syncoryne eximia: Allman 1871; *Coryne tenella* Farquhar

1895; *Sarsia bretonica* Hartlaub 1904 *nomen nudum.*; *Sarsia eximia*: Browne 1905; *Syncoryne tenella*: Bale 1924; ?*Sarsia tubulosa*: Goy, Lakkis and Zeidane 1991.

Type locality: British Isles. Distribution: Circumglobal; eastern North Pacific (southern Alaska to southern California); western North Pacific (Japan); western North Atlantic; eastern North Atlantic; Mediterranean Sea; New Zealand; South Africa; low tidal zone to 33 m.

Remarks: A molecular study based on a portion of the mitochondrial 16S gene (Schuchert, 2005) suggests that this is a true circumglobal species.

Sarsia princeps (Haeckel, 1879).

Codonium princeps Haeckel 1879; *Coryne princeps*: Naumov 1955.

Type locality: Arctic coast of Europe. Distribution: Circumpolar, south to Puget Sound in the eastern North Pacific; depth unknown.

Sarsia tubulosa (M. Sars, 1835). Clapper hydromedusa.

Oceania tubulosa Sars 1835; *Coryne tubulosa* (Sars 1835); *Coryne sarsi* Loven 1835; *Sarsia sarsii* Loven 1835; *Syncoryna decipiens* Dujardin 1845; *Sarsia mirabilis* Agassiz 1849; *Sarsia reticulata* (Agassiz 1862); *Sarsia pattersoni* Haddon 1886; *Sarsia barentsi* Linko 1905; *Sarsia litorea* Hartlaub 1907.

Type locality: Eastern North Atlantic. Distribution: Western North Pacific; eastern North Pacific (Alaska to southern California); western and eastern North Atlantic; Mediterranean and Black seas; Arctic Ocean; low tidal zone to 85 m.

Family Polyorchidae

Polyorchis penicillatus (Eschscholtz, 1829). Penicillate jellyfish; red-eye jellyfish; bell medusa; bell-shaped jellyfish.

Melicertum penicillatum Eschscholtz 1829; *Aglaura penicillata*: de Blainville 1834; *Polyorchis minuta* Murbach and Shearer 1902.

Type locality: California. Distribution: Aleutian Islands to Sea of Cortez, Mexico; coastal and nearshore; common.

Remarks: The polyp stage is unknown for this species.

Family Porpitidae

Velella velella (Linnaeus, 1758). By-the-wind sailor.

Medusa velella Linnaeus 1758; *Holothuria spirans* Forskal 1775; *Velella spirans* (Forskal 1775); *Velella mutica* Lamarck 1801; *Velella tentaculata* Lamarck 1801; *Velella scaphidia* Péron 1807; *Medusa pocillum* Montagu 1815; *Velella limbosa* Lamarck 1816; *Velella pyramidalis* Cranch 1818; *Velella sinistra* Chamisso and Eysenhardt 1821; *Velella oblonga* Chamisso and Eysenhardt 1821; *Velella lata* Chamisso and Eysenhardt 1821; *Velella emarginata* Quoy and Gaimard 1824; *Velella cyanea* Lesson 1826; *Velella australis* de Haan 1827; *Velella pacifica* de Haan 1827; *Velella radackiana* de Haan 1827; *Velella sandwichiana* de Haan 1827; *Velella pocillum*: Fleming 1828; *Rataria cordata* Eschscholtz 1829; *Rataria mitrata* Eschscholtz 1829; *Velella aurora* Eschscholtz 1829; *Velella septentrionalis* Eschscholtz 1829; *Velella caurina* Eschscholtz 1829; *Velella tropica* Eschscholtz 1829; *Velella indica* Eschscholtz 1829; *Velella antarctica* Eschscholtz 1829; *Velella patellaris* Brandt 1835; *Velella oxyothone* Brandt 1835; *Chrysomitra striata* Gegenbaur 1856; *Rataria cristata* Haeckel 1888; *Velella patella* Haeckel 1888; *Armenista sigmoides* Haeckel 1888; *Velella meridionalis* Fewkes 1889; *Velella spiralis* Martin 1904; *Velella subemarginata* Stephens 1905.

Type locality: North Atlantic Ocean and Mediterranean Sea ("*In Pelago. In Mari Mediterraneo*"). Distribution: Worldwide in temperate and tropical seas; eastern North Pacific from the Gulf of Alaska to the tropics; depth unknown.

Family Protohydridae

Sympagohydra tuuli Piraino et al., 2008.

Type locality: Chukchi Sea. Distribution: Northern Alaska (Barrow); Chukchi Sea; Hanger; Beaufort; Elson Lagoon; 2.0–6.3 m.

Remarks: This species is associated with sea ice.

Family Tubulariidae

Ectopleura crocea (Agassiz, 1862).

Parypha crocea Agassiz 1862; *Tubularia mesembryanthemum* Allman 1871; *Ectopleura ralphi* (Bale 1884); *Tubularia crocea*: Fraser 1911.

Type locality: Boston Harbor, Massachusetts. Distribution: Circumglobal in temperate waters; Gulf of Alaska to southern California; western and eastern North Atlantic; Mediterranean Sea; Azores; South Africa; low tidal zone to 30 m.

Hybocodon prolifer Agassiz, 1860.

Coryne fritillaria Steenstrup 1842 (medusa only); ?*Diplonema islandica* Greene 1857; ?*Steenstrupia oweni* Greene 1857; ?*Steenstrupia globosa* Sars 1860; *Diplura fritillaria*: Allman 1872; *Amphicodon globosus* Haeckel 1879; *Amphicodon amphipleurus* Haeckel 1879; *Amphicodon fritillaria*: Browne 1895; *Tubularia prolifera*: Bonnevie 1899; *Auliscus pulcher* Saemundsson 1899; ?*Amphicodon gravidum* Linko 1905; *Hybocodon pulcher*: Hartlaub 1907; *Hybocodon christinae* Hartlaub 1907; *Tubularia pulcher*: Broch 1916; *Tubularia prolifer*: Naumov 1969; *Tubularia christinae*: Naumov 1969.

Type locality: Nahant, north of Boston, Massachusetts. Distribution: North Atlantic and Pacific; from Newfoundland to Chesapeake Bay; western and eastern Greenland; Iceland; northwestern Europe from the English Channel northwards to Beren Island and the Arctic Sea; Bering Sea; Sea of Okhotsk; Hokkaido to Kamchatka, Alaska; Puget Sound; polyp stage is found in shallow depths and protected rock-pools.

Plotocnide borealis Wagner, 1885.

Syndictyon boreale Birulya 1896; *Protiara borealis*: Mayer 1910 (in part); *Sarsia inabai* Uchida 1933; *Eucodonium arctica* Hand and Kan 1961.

Type locality: White Sea. Distribution: Widespread in Arctic and subarctic waters, including Chukchi, East Siberian, Laptev, Kara, White, and western Barents seas; Davis Strait; Norwegian Sea; British Columbia; depth unknown.

Tubularia borealis Clark, 1876.

Type locality: Hagemeister Island, Alaska. Distribution: Known only from type locality; intertidal to shallow subtidal zone.

Tubularia harrimani Nutting, 1901.

Type locality: Orca, Prince William Sound, Alaska. Distribution: Southern Alaska to Friday Harbor, Washington; depth unknown; abundant.

Tubularia indivisa Linnaeus, 1758. Tall tubularia.

Corallina tubularia Ellis 1755; *Tubularia calamaris* Pallas 1766; ?*Tubularia couthouyi* L. Agassiz 1862; *Tubularia simplex* Alder 1862; ?*Tubularia insignis* Allman 1872; ?*Tubularia divisa* Osborn 1893; *Tubularia obliqua* Bonnevie 1898; ?*Tubularia indivisa* var. *antarctica* Hartlaub 1905; *Tubularia indivisa* var. *littoralis* Borowski 1910; *Tubularia indivisa* var. *solitaria* Borowski 1910; *Tubularia ceratogyne* Perez 1920.

Type locality: Eastern North Atlantic. Distribution: Circumboreal to polar; eastern North Pacific (Alaska to Washington); western North Pacific (seas of Okhotsk and Japan); Arctic Ocean (White, Barents, Kara, Laptev, Chukchi and Bering seas); Greenland; western North Atlantic; eastern North Atlantic (Norwegian and North seas); Morocco and Ghana; Baltic Sea; Azores; 10–500 m.

Remarks: The Mediterranean records need reconfirmation, as they are likely misidentifications (Schuchert, 2010). Molecular data has shown that this species might not be monophyletic (Schuchert, 2010).

Suborder Filifera

Family Bougainvilliidae

Bougainvillia britannica (Forbes, 1841).

Hippocrene britannica Forbes 1841; *Bougainvillia dinema* Greene 1857; *Margelis zygonema* Haeckel 1880; *Atractylis linearis* Alder 1862; *Bougainvillia xantha* Hartlaub 1897; *Bougainvillia bella* Hartlaub 1897; *Bougainvillia flavida* Hartlaub 1897 (in part).

Type locality: Eastern North Atlantic (Forbes did not specify the type locality but had medusae from North of Ireland and East of Scotland). Distribution: Eastern North Atlantic and North Sea in coastal areas, with the English Channel as southern limit and Norway as northern limit; west of Iceland; Maine; China; Papua New Guinea; northern Alaska; 60–80 m.

Bougainvillia principis (Steenstrup, 1850).

Margelis principis Steenstrup 1850; ?*Hippocrene simplex* Forbes and Goodsir 1851; *Bougainvillia allmanii* Romanes 1877; *Nemopsis hetronema* Haeckel 1879; *Hippocrene aurea* Linko 1904.

Type locality: Sandvaag, the Faroe Islands. Distribution: Arctic Alaska; Barents Sea; Greenland; northwestern Europe; depth unknown.

Bougainvillia superciliaris (Agassiz, 1849).

Hippocrene superciliaris Agassiz 1849; ?*Bougainvilllia mertensii* Agassiz 1862; *Bougainvillia paradoxa* Mereschowsky 1879; non *Bougainvillia superciliaris*: Naumov 1969.

Type locality: Massachusetts. Distribution: Arctic and northern boreal; western North Atlantic (northern New England, Canada, and western Greenland); Eastern North Atlantic (Iceland, Spitsbergen, Norway, Denmark, Germany, and Holland); western North Pacific (Hokkaido and Yellow Sea); eastern North Pacific (Aleutian Islands, south to California); depth to 100 m.

Remarks: Nagao (1964) found the hydroid in nature growing on a shell of a gastropod belonging to the genus *Neptunea*.

Chiarella centripetalis Maas, 1897.

Rathkea jaschnowi Naumov 1956.

Type locality: Gulf of California, Mexico. Distribution: Bering Sea; Okhotsk Sea; Gulf of California.

Garveia annulata Nutting, 1901.

Bimeria annulata Torrey 1902.

Type locality: Yakutat and Sitka, Alaska. Distribution: Southern Alaska to California; 5–117 m.

Garveia nutans Wright, 1859.

Eudendrium bacciferum Allman 1859.

Type locality: Inch Garvie, Firth of Forth, Shetland Islands, United Kingdom. Distribution: Great Britain; the Faroe Islands; English Channel; Belgium; Bay of Biscay; Strait of Gibralter; ?Alaska; depth up to 100 m.

Remarks: Schuchert (2007) noted that the record from Alaska (Nutting, 1901) is somewhat doubtful.

Rhizorhagium roseum M. Sars, 1874.

?*Atractylis coccinea* Wright 1861; ?*Atractylis miniata* Wright 1863; *Perigonimus coccineus*: Hincks 1871; *Perigonimus sarsii* Bonnevie 1898; *Garveia groenlandica* Levinsen 1893; *Wrightia coccinea*: Russell 1907; *Perigonimus roseus*: Naumov 1969.

Type locality: Norway (on *Tubularia indivisa*). Distribution: Circumpolar Arctic-boreal. Norway; western Sweden; the Faroe Islands; western Scotland; Greenland; Iceland; Barents Sea; White Sea; northeastern Canada; western Canada; Alaska; 15–200 m.

Family Bythotiaridae

Calycopsis birulai (Linko, 1913).

Sibogita birulai Linko 1913; *Eumedusa similis* Bigelow 1920.

Type locality: Russia. Distribution: Arctic, from Barents Sea to Alaska; depth unknown.

Calycopsis nematophora Bigelow, 1913.

Perigonimus nematophora: Naumov 1955.

Type locality: Line from western Aleutians to Kamchatka by way of Bering Island and the rest of Komandorski Islands. Distribution: Western North Pacific, Sea of Okhotsk; Bering Sea; Aleutian Islands south to Oregon; >500 m; rarely at 150–200 m.

Remarks: The polyp stage is unknown for this genus.

Family Eudendriidae

Eudendrium capillare Alder, 1856.

Corymbogonium capillare: Allman 1861; ?*Eudendrium humile* var. *corymbifera* Allman 1863; *Eudendrium tenue* Agassiz 1865; ?*Eudendrium tenellum* Allman 1877; *Eudendrium hyalinum* Bonnevie 1898; *Eudendrium parvum* Warren 1908; ?*Eudendrium capillare* var. *mediterranea* Neppi 1917; *Eudendrium sagaminum* Yamada 1954.

Type locality: North Sea, Embleton Bay, Northumberland, Great Britain. Distribution: Eastern North Pacific (southeast Alaska to Oregon); western North Pacific (seas of Okhotsk and Japan, Bering Sea); eastern and western North Atlantic; Mediterranean Sea; 0–200 m.

Remarks: *Eudendrium tenellum* Allman, 1877 is likely a junior synonym of *E. capillare* (Schuchert, 2008). Reliable records for this species (using nematocyst morphology) include those from the eastern North Atlantic, Mediterranean, Greenland, Bermudas, southern Africa, and Japan (Schuchert, 2008).

Eudendrium rameum (Pallas, 1766).

Tubularia ramea Pallas 1766; *Eudendrium planum* Bonnevie 1898; *Eudendrium stratum* Bonnevie 1898.

Type locality: Meditteranean Sea. Distribution: ?Cosmopolitan; eastern North Pacific (southeast Alaska to southern California); western North Pacific: (Bering and East Siberian seas, seas of Okhotsk and Japan); western and eastern North Atlantic; Mediterranean Sea; Arctic Ocean (Barents, White, Kara and Laptev seas); southern Indian Ocean; 8–300 m.

Remarks: Schuchert (2008) mentioned that the Pacific records of this species cannot be considered reliable until the nematocyst morphology is examined in those populations. Molecular data from a portion of the 16S mitochondrial gene indicates that this species is not monophyletic (Schuchert, 2008).

Eudendrium vaginatum Allman, 1863.

Eudendrium annulatum: Levinsen 1893, Schuchert 2001, non *Eudendrium annulatum* Norman 1864.

Type locality: Shetland Isles, Scotland. Distribution: Arctic to northern boreal; Norway; Iceland; western Greenland; Newfoundland; 0–180 m.

Remarks: Pacific records (including Alaska: Nutting, 1901; Fraser, 1937) need confirmation by examining their nematocysts (Schuchert, 2008).

Protiaropsis anonyma (Maas, 1905).

Heterotiara anonyma Maas 1905; *Gymnogonium zhengzhongii* Xu and Huang 1994.

Type locality: Halmahera Sea. Distribution: Aleutian Islands and Gulf of Alaska to Peru; Kuril Islands; central Indo-Pacific; Gulf of Mexico; Atlantic and Indian Oceans; depth unknown.

Family Pandeidae

Catablema multicirratum Kishinouye, 1910.

Catablema multicirrata Kishinouye 1910; *Perigonimus multicirratus*: Naumov 1969.

Type locality: Japan. Distribution: Eastern North Pacific (Gulf of Alaska); western North Pacific (Bering Sea and Sea of Okhotsk, Pacific Ocean side of the Kurils and Hokkaido); western North Atlantic (Davis Strait); Greenland; common in surface plankton near coasts.

Remarks: The polyp stage is unknown for this species.

Catablema nodulosum Bigelow, 1913.

Catablema vesicarium var. *nodulosa* Bigelow 1913.

Type locality: Western North Pacific. Distribution: Alaska to Washington; western North Pacific; depth unknown.

Catablema vesicarium (A. Agassiz, 1862). Constricted jellyfish.

Turris vesicaria A. Agassiz 1862; *Tiara conifer* Haeckel 1879; *Catablema campanula* Haeckel 1879; *Catablema eurystoma* Haeckel 1879.

Type locality: Massachusetts. Distribution: Widely distributed in Arctic waters, southwards to Vancouver and the Kuril Islands in the Pacific, and to northern Norway and Cape Cod in the Atlantic; depth unknown.

Halitholus cirratus Hartlaub, 1913.

Type locality: Atlantic coast of Labrador. Distribution: Arctic circumpolar; Bering Sea; Baltic and Kattegat; depth unknown.

Halitholus pauper Hartlaub, 1914.

Type locality: Atlantic coast of Nova Scotia. Distribution: Arctic Alaska and Canada; Iceland; Greenland; Vancouver Island; Japan; Kamchatka; depth unknown.

Halitholus yoldiaarcticae (Birula, 1897).

Perigonimus yoldiaarcticae Birula 1897.

Type locality: Arctic Ocean, northern Russia, Gulf of Ob. Distribution: Arctic Ocean (White, Barents, Laptev, Kara, East Siberian and Chukchi seas); Bering Strait; western North Atlantic (Davis Strait and Newfoundland); eastern North Atlantic (Baltic Sea); depth unknown.

Remarks: The polyp stage is found on shells of Nuculidae, Astartidae, and other bivalve shells.

Leuckartiara nobilis Hartlaub, 1914.

Type locality: Atlantic Coast of Newfoundland. Distribution: Arctic Alaska; Vancouver Island; southern Japan; North Atlantic; Mediterranean Sea; depth unknown.

Neoturris breviconis (Murbach and Shearer, 1902). Neoturrid or blob-top jellyfish.

Turris breviconis Murbach and Shearer 1902; *Leuckartiara brevicornis*: Hartlaub 1914 *nomen nullum*; *Leuckartiara breviconis*: Kramp and Damas 1925; *Perigonimus breviconis*: Naumov 1969.

Type locality: St. Paul Island, Pribilof Islands, Bering Sea. Distribution: Circumpolar Arctic to northern boreal; as far south as British Columbia and Japan in the Pacific; in the eastern North Atlantic, the southern limits are the northern North Sea, Firth of Clyde, western Ireland, and the south of Iceland; depth unknown; rare.

Remarks: The polyp stage is unknown for this species. Schuchert (2007) suspected that the Atlantic populations belong to a different species that might be in *Leuckartiara*.

Pandea rubra Bigelow, 1913.

Type locality: Western North Pacific, off southeast coast of Kamchatka. Distribution: Western and eastern North Pacific; western and eastern North Atlantic; Bermuda; India; South Atlantic; 0–1750 m; rare.

Remarks: The polyp stage is unknown for this species.

Family Proboscidactylidae

Proboscidactyla flavicirrata Brandt, 1835.

Proboscidactyla pacifica (Maas 1909).

Type locality: Not traced. Distribution: Alaska; British Columbia; Kamchatka; North Atlantic; depth unknown.

Family Rathkeidae

Rathkea octopunctata (M. Sars, 1835).

Cytaeis octopunctata M. Sars 1835; *Oceania Blumenbachii* Rathke 1835; *Rathkea Blumenbachii*: Brandt 1838; *Hippocrene octopunctata*: Forbes 1841; *Bugainvillia octopunctata*: Lesson 1843; *Lizzia octopunctata*: Forbes 1848; *Lizzia grata* A. Agassiz 1862; *Rathkia Blumenbachii*: L. Agassiz 1862; ?*Circe hyalina* Van Beneden 1867; *Margellium octopunctatum* Haeckel 1879; *Margellium gratum*: Haeckel 1879; *Lizzia blondina* Wagner 1885; *Lizzia shimiko* Kishinouye 1910.

Type locality: Bergen, Norway. Distribution: Chukchi Sea to the Aleutian Islands; British Columbia; Kamchatka; northern Japan; northwestern Europe from Norway to Strait of Gibraltar; Mediterranean; Black Sea; Barents and White seas; Iceland; Greenland; Hudson Strait; Newfoundland; New England; Bermuda; Victoria, Australia; New Zealand; shallow water, on *Mytilus* and oyster shells and on stones.

Remarks: Molecular data has shown that this species might not be monophyletic (Schuchert, 2007).

Family Stylasteridae (hydrocorals)

Cyclohelia lamellata Cairns, 1991.

Type locality: Pribilof Islands, Bering Sea. Distribution: Bering Sea and the Aleutian Islands (Rat Islands to the Islands of Four Mountains); 27–567 m; uncommon.

Crypthelia trophostega Fisher, 1938.

Type locality: Amukta Pass, Aleutian Islands. Distribution: Near Islands to Amuka Pass, Petrel and Bowers banks, off Pribilof Bank; 146–1913 m, most common between 200–400 m; common.

Distichopora borealis Fisher, 1938.

Distichopora sp. Heifetz 2002 (listed), Heifetz et al. 2005 (listed).

Type locality: Amutka Pass, Aleutian Islands. Distribution: Aleutian Islands from the Near Islands to Amukta Pass, including Bowers Bank; off Cape Ommaney, Alexander Archipelago, and Dixon Entrance, Queen Charlotte Islands; 53–1267 m.

Errinopora dichotoma Lindner and Cairns, 2011.

Type locality: Northwestern Petrel Bank, Aleutian Islands. Distribution: Petrel Bank and Islands of Four Mountains, Aleutian Islands; 178–217 m.

Errinopora disticha Lindner and Cairns, 2011.

Type locality: West of Semisopochnoi Island, Petrel Bank, Aleutian Islands. Distribution: Petrel Bank, Amukta Pass, and Four Kings Islands, Aleutian Islands; 178–536 m.

Errinopora fisheri Lindner and Cairns, 2011.

Type locality: Attu Island, Aleutian Islands. Distribution: Known only from type locality; 455–458 m.

Errinopora nanneca Fisher, 1938.

Errinopora pourtalesi: Wing and Barnard 2004.

Type locality: Kiska Island, Rat Islands, Aleutian Islands (52°05′N, 177°40′E). Distribution: Aleutian Islands (eastern Rat Islands to Islands of Four Mountains, including Petrel Bank); 40–517 m.

Errinopora undulata Lindner and Cairns, 2011.

Type locality: Amukta Pass, Aleutian Islands. Distribution: Amukta Pass and south of Semisopochnoi Island, Aleutian Islands; 350–640 m.

Errinopora zarhyncha Fisher, 1938.

Type locality: Amukta Pass, Aleutian Islands. Distribution: Aleutian Islands in Amchitka Pass, on Bowers Bank, and off Seguam Island; 207–658 m.

Stylantheca papillosa (Dall, 1884).

Allopora papillosa Dall 1884; *Stylantheca porphyra* Fisher 1931, Boschma 1956, Cairns 1983, Wing and Barnard 2004, Heifetz et al. 2005, Stone and Shotwell 2007, Whitmire and Clarke 2007, Jamieson et al. 2007; *Allopora petrograpta* Fisher 1938; *Allopora porphyra*: Fisher 1938; *Stylaster (Allopora)* *porphyrus*: Broch 1942; *Stylaster (Stylantheca) porphyra*: Boschma 1951; *Stylantheca petrograpta*: Cairns 1983, Wing and Barnard 2004, Heifetz et al. 2005, Stone and Shotwell 2007, Whitmire and Clarke 2007, Jamieson et al. 2007, Lindner et al. 2008; *Stylaster porphyra*: Jamieson et al. 2007.

Type locality: Coal Harbor, Unga, Shumagin Islands, Alaska Peninsula. Distribution: Shumagin Islands to Monterey Bay, California; intertidal zone to 27 m.

Stylaster (Group A, sensu Cairns and Lindner, 2011)

Stylaster brochi (Fisher, 1938). Rough orange hydrocoral.

Allopora brochi Fisher 1938; ?*Allopora abei* Eguchi 1968; ?*Stylaster abei*: Cairns 1983; *Stylaster polyorchis*: Lindner et al. 2008; *Stylaster campylecus*: Lindner et al. 2008.

Type locality: Petrel Bank, Aleutian Islands. Distribution: The Aleutian Islands west of Attu Island to Unalaska, including Petrel Bank; 75–351 m, most common between 100–200 m; common.

Remarks: Commensal spionid polychaetes of the genus *Polydora* are almost always associated with this species (Cairns and Lindner, 2011).

Stylaster repandus Lindner and Cairns, 2011.

Type locality: Southeast of Amukta Island, Aleutian Islands. Distribution: Known only from three localities in the vicinity of Amukta Island, Aleutian Islands; 375–475 m.

Stylaster stejnegeri (Fisher, 1938). Stejneger's hydrocoral.

Allopora stejnegeri Fisher 1938.

Type locality: Petrel Bank, Aleutian Islands. Distribution: Known only from type locality; 79–95 m.

Stylaster venustus (Verrill, 1870). Beautiful hydrocoral.

Allopora venusta Verrill 1870.

Type locality: Neah Bay, near Cape Flattery, Washington. Distribution: Gulf of Alaska to California; 8–75 m.

Stylaster verrillii (Dall, 1884). Pink hydrocoral.

Allopora verrilli Dall 1884; *Allopora moseleyi* Dall 1884; *Stylaster (Allopora) norvegicus* forma *pacifica* Broch 1936; *Stylaster (Allopora) verrillii*: Broch 1942.

Type locality: Chika Islands, Akutan Pass, Aleutian Islands (near Unalaska). Distribution: Kiska Harbor, Aleutian Islands, to Washington; 21–393 m, most common between 60–155 m.

Stylaster (Group B, sensu Cairns and Lindner, 2011)

Stylaster campylecus (Fisher, 1938). Common hydrocoral.

Allopora campyleca Fisher 1938; *Allopora polyorchis* Fisher 1938; *Allopora campyleca tylota* Fisher 1938; *Allopora moseleyana* Fisher 1938; *Stylaster moseleyanus*: Cairns 1983, Wing and Barnard 2004, Heifetz et al. 2005, Stone and Shotwell 2007, Jamieson et al. 2007; *Stylaster polyorchis*: Cairns 1983, Cairns and Macintyre 1992, Heifetz 2002, Wing and Barnard 2004, Heifetz et al. 2005, Stone and Shotwell 2007, Jamieson et al. 2007, non Lindner et al. 2008 (= *S. brochi*); *Stylaster campylecus tylotus*: Cairns 1983, Wing and Barnard 2004, Heifetz et al. 2005, Stone and Shotwell 2007, Jamieson et al. 2007; *Stylaster campylecus campylecus*: Wing and Barnard 2004, Heifetz et al. 2005, Stone and Shotwell 2007, Jamieson et al. 2007.

Type locality: Amukta Pass, Aleutian Islands. Distribution: Aleutian Islands from Agattu Island to Unalaska including Petrel and Bowers banks, two disjunct records in Alexander Archipelago; 82–1011 m, most common between 150–500 m; common.

Stylaster leptostylus (Fisher, 1938).

Allopora moseleyana forma *leptostyla* Fisher 1938; *Allopora moseleyana* Fisher 1938 (in part); *Stylaster moseleyanus* forma *leptostylus*: Cairns 1983.

Type locality: Seguam Island, Amukta Pass, Aleutian Islands. Distribution: Known only from type locality; 518 m.

Stylaster parageus columbiensis Lindner and Cairns, 2011.

Allopora campyleca Fisher 1938 (in part, specimen from *Alb*-4230).

Type locality: Cape Flattery, Washington. Distribution: Southeast Alaska in Dixon Entrance to Cape Flattery, Washington; 246–285 m.

Stylaster parageus parageus (Fisher, 1938).

Stylaster (Allopora) boreopacificus forma *typica* Broch 1936 (in part, specimens from Alaska); *Allopora campylecus paragea* Fisher 1938.

Type locality: Tenakee Springs, near Juneau, Alaska. Distribution: Bays and inland passages of southeastern Alaska from off Kayak Island to just north of Dixon Entrance (i.e., Prince of Wales Islands and Portland Canal); 23–401 m.

Stylaster trachystomus (Fisher, 1938).

Allopora campyleca trachystoma Fisher 1938.

Type locality: East Cape, Attu Island, Aleutian Islands. Distribution: Aleutian Islands; 115–366 m.

Stylaster (Group C, sensu Cairns and Lindner, 2011)

Stylaster alaskanus Fisher, 1938. Alaskan hydrocoral.

Stylaster gemmascens alaskanus Fisher 1938; *Stylaster cancellatus* Fisher 1938.

Type locality: Amutka Pass, Aleutian Islands. Distribution: West of Attu Island to Amukta Pass, including Bowers Bank, Aleutian Islands; 146–582 m.

Stylaster crassiseptum Lindner and Cairns, 2011.

Type locality: Bowers Bank, Aleutian Islands. Distribution: Kiska to Atka islands, Bowers Bank, Aleutian islands; 291–531 m.

Stylaster elassotomus Fisher, 1938. Smooth-tube hydrocoral.

Type locality: Agattu Island, Aleutian Islands. Distribution: Known only from type locality; 882 m.

Family incertae sedis

Brinckmannia hexactinellidophila Schuchert and Reiswig, 2006.

Type locality: Jervis Inlet, British Columbia. Distribution: Aleutian Islands and Gulf of Alaska to Central California; 23–1311 m.

Remarks: This species is commensal in the glass sponge *Heterochone* and lacks tentacles and gonophores. It has affinities with the family Proboscidactylidae but its family status remains unresolved (Schuchert and Reiswig, 2006).

Order Leptothecata

Suborder Conica

Family Aequoreidae

Aequorea victoria (Murbach and Shearer, 1902).

Mesonema victoria Murbach and Shearer 1902; *Aequorea aequorea* var. *aequorea* Bigelow 1913 (in part, non *Medusa aequorea* Forskal 1775); *Aequorea forskalea* Cameron 1915 (non *Aequorea forskalea* Péron and Lesueur 1809); *Aequorea aequorea*: Weese and Townsend 1921, Foerster 1923 (in part), Fraser 1932, Hyman 1940, Kramp 1961 (in part), 1965 (in part); *Campanulina membranosa* Strong 1925.

Type locality: Victoria Harbour, British Columbia. Distribution: Gulf of Alaska to Washington; shallow subtidal zone.

Family Aglaopheniidae

Aglaophenia struthionides (Murray, 1860). Ostrich-plume hydroid.

Plumularia struthionides Murray 1860.

Type locality: California. Distribution: Alaska to Baja California, Mexico; low tidal zone to 155 m.

Family Campanulinidae

Calycella syringa (Linnaeus, 1767). Creeping bell hydroid.

Sertularia syringa Linnaeus 1767.

Type locality: North Atlantic Ocean ("*Habitat in Oceano*"). Distribution: Eastern North Pacific (Alaska to Cedros Island, Baja California, Mexico); western North Pacific (northern Asia and Kara Sea); eastern North Atlantic (Great Britain, Norway, Iceland, and Greenland); western North Atlantic (Labrador, Canada, south to Massachussetts); intertidal zone to 300 m.

Campanulina rugosa Nutting, 1901.

Type locality: Juneau, Alaska. Distribution: Alaska south to Washington; depth unknown.

Family Eirenidae

Eutonina indicans (Romanes, 1876).

Tiarops indicans Romanes 1876; *Tiaropsis indicans* (Romanes 1876); *Eirene indicans* (Romanes 1876); *Eutima indicans* (Romanes 1876); *Eutonina socialis* Hartlaub 1897; *Eutimium indicans*: Naumov 1956.

Type locality: East coast of Scotland. Distribution: Aleutian Islands; British Columbia; California; Kuril Islands, Kamchatka, and Japan; eastern North Atlantic; Iceland; India; depth unknown.

Family Halecidae

Halecium annulatum Torrey, 1902.

Type locality: Coronado, California. Distribution: Southern Alaska to southern California; low tidal zone to 148 m.

Halecium beani (Johnston, 1847).

Thoa beanii Johnston 1838; *Halecium boreale* Lorenz 1886; *Halecium beanei* Stechow 1919; *Halecium beani:* Naumov 1960.

Type locality: Near Scarborough, Yorkshire, England. Distribution: ?Cosmopolitan; 0–150 m.

Halecium corrugatum Nutting, 1899.

Type locality: Puget Sound, Washington. Distribution: Eastern North Pacific: Southeast Alaska south to Baja California, Mexico; eastern North Atlantic; low tidal zone to 110 m.

Halecium halecinum (Linnaeus, 1758). Herringbone hydroid.

Corallina scuposa pennata, cauliculis crassiusculis rigidis Ray 1724; *Corallina erecta, tubulosa, pennata, halecis spinae facie* Ellis 1755; *Sertularia halecina* Linnaeus 1758; *Thoa halecina:* Johnston 1838; *Halecium geniculatum* Norman 1867.

Type locality: Whitstable, Kent, England. Distribution: Eastern and western Atlantic; Mediterranean; South Africa; North Pacific from Kodiak, Alaska to San Francisco Bay, California; Arctic Seas; 13–160 m.

Halecium labrosum Alder, 1859.

?*Eudendrium pusillum* Sars 1857; *Halecium crenulatum* Hinks 1874; *Halecium pusillum:* Kossowska 1911; *Halecium annulatum* Stechow 1919; *Halecium reflexum* Stechow 1919; *Halecium schneiden*: Leloup 1952.

Type locality: Northumberland coast, Shetland, Moray Firth, UK. Distribution: Arctic-boreal; North Atlantic reaching south at least to Brittany and the North Sea, perhaps even Spain and Azores; North Pacific from Japan to Alaska, south to Vancouver Island; 5–439 m.

Halecium muricatum (Ellis and Solander, 1786). Sea hedgehog hydroid.

Sertularia muricata Ellis and Solander 1786.

Type locality: Not traced. Distribution: Eastern North Pacific; depth unknown.

Halecium ornatum Nutting, 1901.

Type locality: Berg Inlet, Glacier Bay, Alaska. Distribution: Eastern North Pacific and eastern North Atlantic; depth unknown.

Halecium reversum Nutting, 1901.

Type locality: Juneau, Alaska. Distribution: Alaska south to Vancouver Island; Sea of Okhotsk and Bering Sea; 20–164 m.

Halecium robustum Nutting, 1901.

Type locality: Berg Inlet, Glacier Bay, Alaska. Distribution: Known only from Southeast Alaska; 37 m; rare.

Halecium scutum Clark, 1877.

Halecium boreale Lorenz 1886; *Halecium halecinum*: Broch 1910 (in part); *Halecium beringi* Naumov 1960; *Halecium beanie*: Naumov 1969 [non *Halecium beanii* (Johnston 1838)].

Type locality: Semidi Islands to Unalaska, Alaska. Distribution: Circumpolar; North Atlantic south to Cape Farewell in Greenland; Iceland and Faroe Islands; 5–165 m.

Halecium speciosum Nutting, 1901.

Type locality: Yakutat, Alaska. Distribution: Alaska south to San Francisco, California; Sea of Okhotsk, South Kuril Strait, Pacific side of Paramushir Island, Kuril Islands; 18–51 m.

Halecium tenellum Hincks, 1861.

Halecium washingtoni Nutting 1899.

Type locality: Great Britain. Distribution: Cosmopolitan; low tidal zone to 439 m.

Halecium wilsoni Calkins, 1899.

Type locality: Puget Sound, Washington. Distribution: Alaska south to southern California; 27–82 m.

Ophiodissa carchesium (Fraser, 1914).

Ophiodes carchesium Fraser 1914.

Type locality: Trinity Islands, Gulf of Alaska. Distribution: Known only from type locality; 91 m.

Family Halopterididae

Nuditheca dalli (Clark, 1876).

Macrorhynchia dalli Clark 1876.

Type locality: Akutan Pass, Alaska. Distribution: Aleutian Islands and southern Alaska; intertidal zone to shallow subtidal zone.

Family Lafoeidae

Filellum serpens (Hassall, 1852).

Campanularia serpens Hassall 1852; *Capsularia serpens*: Gray 1848; *Reticularia immersa* Thomson 1853; *Lafoea abietina*: Billard 1904; *Grammaria serpens*: Vervoort 1946; *Reticularia serpens*: Rees and Thursfield 1965.

Type locality: Dublin, Ireland. Distribution: ?Cosmopolitan. Southern Alaska to California; common in the eastern North Atlantic; low tidal zone to 200 m.

Remarks: This species has been recorded growing most frequently on sertularian hydroids.

Grammaria abietina (M. Sars, 1851).

Campanularia abietina Sars 1851; *Grammaria robusta* Stimpson 1854; *Grammaria ramosa* Alder 1856; *Salacia* abietina: Hincks 1868; *Grammaria magellanica* Allman 1888; *Grammaria stentor* Allman 1888; *Grammaria insignis* Allman 1888; *Grammaria intermedia* Pfeffer 1889; *Grammaria abietina*: Broch 1917; *Grammaria abietina* var. *brevicyatha* Broch 1918; *Reticularia abietina*: Rees and Thursfield 1965.

Type locality: Norway. Distribution: Subarctic and Arctic waters; eastern North Pacific (south to British Columbia); 10–1500 m.

Grammaria immersa Nutting, 1901.

Type locality: Kodiak, St. Paul Harbor, Alaska. Distribution: Subarctic to Arctic waters; eastern North Pacific (south to British Columbia); 15–55 m.

Lafoea adhaerens Nutting, 1901.

Filellum adhaerens (Nutting 1901).

Type locality: Kodiak, Alaska. Distribution: Known only from type locality; depth unknown.

Lafoea dumosa (Fleming, 1820).

Sertularia dumosa Fleming 1820; *Lafoea cornuta* Lamouroux 1821; *Campanularia dumosa*: Fleming 1828; *Capsularia dumosa:* Gray 1848; *Campanularia fruticosa* Sars 1850; *Campanularia gracillima* Alder 1856; *Lafoea fruticosa:* Hincks 1868; *Lafoea pocillum* Hincks 1868; *Hebella pocillum:* Ritchie 1911; *Lafoea gracillima:* Broch 1918; *Lafoea intermedia* Fraser 1938; *Lafoea fruticosa* forma *pocillum:* Vervoort 1949.

Type locality: Arbroath, Angus, Scotland. Distribution: Western North Pacific (White, Barents, Kara, Laptev, and Bering seas, seas of Okhotsk and Japan); eastern North Pacific (Alaska south to Baja California); eastern North and western North Atlantic; South Africa; Antarctica; low tidal zone to 110 m.

Zygophylax carolina (Fraser, 1911).

Lictorella carolina Fraser 1911.

Type locality: Trinity Islands, Gulf of Alaska. Distribution: Known only from type locality; depth unknown.

Zygophylax convallaria (Allman, 1877).

Lafoea convallaria Allman 1877; *Lictorella cervicornis* Nutting 1905.

Type locality: Eastern Florida. Distribution: Southern Alaska to British Columbia; western North Atlantic; 55–274 m.

Family Laodiceidae

Ptychogena lactea A. Agassiz, 1865.

Ptychogena pinnulata Haeckel 1879; *Ptychogena pinnulata* var. *intermedia* Linko 1904.

Type locality: Massachusetts Bay. Distribution: Arctic circumpolar; Bering Sea; Okhotsk Sea; northern Japan; depth unknown.

Staurostoma mertensii (Brandt, 1835). Whitecross jellyfish.

Staurophora mertensii Brandt 1835; *Staurophora laciniata* L. Agassiz 1849; *Oceania multicirrata* Sars 1851; *Staurophora vitrea* Sars 1863; *Staurophora keithii* Peach 1867; *Staurostoma laciniata* Haeckel 1879; *Thaumantias melanops* M'Intosh 1890; *Staurophora arctica* Browne 1907; *Staurophora falklandica* Browne 1907; *Staurophora discoidea* Kishinouye 1910; *Cuspidella humilis* Naumov 1951; *Cuspidella mertensii*: Naumov 1960.

Type locality: Southern Alaska. Distribution: Arctic circumpolar; Gulf of Alaska; northern Japan; North Atlantic; depth unknown.

Family Melicertidae

Melicertum octocostatum (M. Sars, 1835).

Oceania octocostata M. Sars 1835; *Rathkea octocostatum* (M. Sars 1835); *Melicertum campanula* (Fabricius 1780); *Aequorea octocostata*: Lesson 1843; *Thaumantias milleri* Landsborough 1847; *Stomobrachium octocostatum*: Forbes 1848; *Melicertum pusillum* L. Agassiz 1862 (in part, non *Actinia pusilla* Swartz 1788); *Melicertum georgicum* A. Agassiz (in L. Agassiz) 1862; *Melicertidium octocostatum*: Haeckel 1879.

Type locality: Norway. Distribution: Arctic Alaska to Washington and Japan; North Atlantic; Papua New Guinea; depth unknown.

Family Mitrocomidae

Earleria cellularia (A. Agassiz, 1865). Cross jellyfish.

Laodicea cellularia A. Agassiz (in L. Agassiz) 1862; *Thaumantias cellularia*: Haeckel 1879; *Halistaura cellularia*: Bigelow 1913; *Mitrocoma cellularia*: Harvey 1921; *Foersteria cellularia; Mitrocoma discoidea* Foerster 1923 (in part, non *M. discoidea* Torrey 1909).

Type locality: Gulf of Georgia, Washington Territory. Distribution: Bering Sea to southern California; medusa is found in coastal waters; polyp stage has never been reported from the wild; depth unknown.

Family Plumulariidae

Plumularia halecioides Alder, 1859.

Type locality: Cullercoats, Northumberland, United Kingdom. Distribution: Gulf of Alaska to British Columbia; Atlantic coast of Europe south of the North Sea; Mediterranean Sea; Black Sea; Cape Verde Islands; reported from Russia; low tidal zone to 110 m.

Plumularia lagenifera Allman, 1885.

Plumularia californica Marktanner-Turneretscher 1890; *Plumularia lagenifera* var. *septifera* Torrey 1902; non *Plumularia lagenifera*: Millard 1957, 1975 (= *Plumularia gaimardi*).

Type locality: Vancouver Island, British Columbia. Distribution: Southeast Alaska to California; Japan; Chile; low tidal zone to 146 m.

Remarks: Schuchert (2013) resolved the status of this species.

Plumularia plumularoides (Clark, 1876).

Halecium plumularoides Clark 1876.

Type locality: Cape Etolin, Nunivak Island, Alaska. Distribution: Bering Sea, Alaska, south to California; 15–46 m.

Plumularia setacea (Linnaeus, 1758). Little seabristle.

Corallina setacea Ellis 1755; *Sertularia setacea* Linnaeus 1758; *Sertularia Templetoni* Fleming 1828; *Plumularia tripartita* von Lendenfeld 1885; *Plumularia multinoda* Allman 1885; *Plumularia turgida* Bale 1888; *Plumularia corrugata* Nutting 1900; *Plumularia palmeri* Nutting 1900; *Plumularia milleri* Nutting 1906; *Plumularia setacea* forma *typica* Broch 1912; *Plumularia setacea* var. *microtheca* Broch 1912; *Plumularia setacea* var. *Nuttingi* Broch 1912; *Plumularia setacea* var. *elongata* Bedot 1921; *Plumularia setacea* var. *opima* Bale 1924; *Plumularia diploptera* Totton 1930; *Plumularia setacea* var. *setacea* Ralph 1961; *Polyplumularia setacea*: Harms 1993.

Type locality: Whitstable, Northeast Kent, England. Schuchert (2013:118) stated that "Linnaeus based his name on Ellis (1755), who depicted material from Whitstable, Northeast Kent, England. Whitstable must thus be assumed as type locality." Distribution: Cosmopolitan; low tidal zone to 165 m.

Family Sertulariidae

Abietinaria abietina (Linnaeus, 1758). Sea fir.

Sertularia abietina Linnaeus 1758.

Type locality: North Atlantic Ocean ("*In Oceano*"). Distribution: Both sides of the North Atlantic Ocean from the Arctic region to Madeira; all Arctic seas; North Pacific Ocean south to California and Japan; Madagascar; eastern and western Greenland; Iceland; 10–630 m.

Abietinaria alexanderi Nutting, 1904.

Type locality: Aleutian Islands. Distribution: Known only from the type locality; 100–102 m.

Abietinaria annulata (Kirchenpauer, 1884).

Thuiaria annulata Kirchenpauer 1884.

Type locality: South of Unimak Pass, Alaska. Distribution: Known only from type locality; 66 m.

Abietinaria filicula (Ellis and Solander, 1786). Fern hydroid.

Sertularia filicula Ellis and Solander 1786.

Type locality: Not traced. Distribution: Eastern North Pacific; depth unknown.

Abietinaria gigantea (Clark, 1877).

Thuiaria gigantea Clark 1877; *Abietinaria urceolus* Naumov 1960.

Type locality: Alaska. Distribution: Bering Sea; eastern North Pacific (Aleutian Islands south to California); western North Pacific (Sea of Okhotsk and Sea of Japan); Kuril and Commander islands; 25–510 m.

Abietinaria gracilis Nutting, 1904.

Type locality: Entrance to the Strait of Juan de Fuca, British Columbia. Distribution: Aleutian Islands south to Washington; Sea of Okhotsk, South Kuril Strait, Kuril and Commander islands; 73–600 m.

Abietinaria greenei (Murray, 1860). Bushy white hydroid.

Sertularia tricuspidata Murray 1860; *Sertularia greenei* Murray 1860; *Cotulina greenei*: A. Agassiz; *Sertularella greenei*: Hartlaub 1900.

Type locality: California. Distribution: Eastern Bering Sea to California; 0–80 m.

Abietinaria inconstans (Clark, 1877).

Sertularia inconstans Clark 1877; *Thuiaria costata* Nutting 1901; *Abietinaria amphora* Nutting 1904.

Type locality: Unalaska Beach, Alaska. Distribution: Alaska to Tanner Bank, California; intertidal zone to 275 m.

Abietinaria kincaidi (Nutting, 1901).

Thuiaria kincaidi Nutting 1901; *Thuiaria elegans* Nutting 1901; *Diphasia kincaidi* Nutting 1904.

Type locality: Berg Inlet and Dutch Harbor, Alaska. Distribution: Aleutian Islands and Southeast Alaska (Admiralty Island); Bering Sea and seas of Okhotsk and Japan; western North Atlantic in the Gulf of St. Lawrence, Canada; 53–296 m.

Abietinaria rigida Fraser, 1911.

Type locality: Vancouver Island, British Columbia. Distribution: Alaska south to Washington; 15–440 m.

Abietinaria thuiarioides (Clark, 1877).

Sertularia thuiarioides Clark 1877; *Abietinaria koltuni* Naumov 1960.

Type locality: Bering Sea, 5 miles west of the West Cape of Nunivak Island. Distribution: Bering Sea and northwestern Gulf of Alaska in Chignik Bay; 20–44 m.

Abietinaria traski (Torrey, 1902).

Sertularia traski Torrey 1902.

Type locality: San Pedro, California. Distribution: Berg Inlet, Alaska to San Benito Islands, Baja California, Mexico; 10–400 m.

Abietinaria turgida (Clark, 1876).

Thuiaria turgida Clark 1876.

Type locality: Alaska (exact locality unknown because Clark lists several localities in Alaska while not specifying a type locality). The localities were as follows: Port Etches; 5 to 8 fathoms, gravel and stones, May 30. Popoff Straits, Shumagin Islands; near edge of reef in 6 fathoms, July. Semidi Islands; 15 to 28 fathoms, gravel, June 10. Coal Harbor, Shumagin Islands; beach. Eider village, Unalaska; 25 to 30 fathoms, sandy mud, June 4. Haggmeister Island, beach. Unalaska; 6 fathoms, Nov. 11. Kiska Harbor, Aleutian Islands. Lituya Bay; 9 fathoms, sandy mud. Akutan Pass, near Unalaska. St. Paul Island (Pribilof group); 9 fathoms, in kelp, July 24. Middleton Island; 12 fathoms, gravel, June 2. Distribution: Chukchi Sea and Bering Sea south to southern California; Sea of Okhotsk, South Kuril Strait; low tidal zone to 140 m.

Abietinaria variabilis (Clark, 1876).

Sertularia variabilis Clark 1876; *Thuiaria variabilis*: Nutting 1901.

Type locality: Alaska to California (Clark listed several localities in Alaska and California but did not designate a type locality). Distribution: Alaska to southern California; Sea of Okhotsk, Bering Sea; 25–4000 m.

Dictyocladium flabellum Nutting, 1904.

Type locality: Off entrance to Strait of Juan de Fuca. Distribution: Aleutian Islands; southern Alaska south to Washington; 49–132 m.

Sertularella albida Kirchenpauer, 1884.

Type locality: Shumagin Island, Kamchatka, Bering Sea. Distribution: Bering Sea to Washington; western North Pacific; 10–40 m.

Sertularella clarki Mereschkowsky, 1878.

Amphisbetia clarkii (Mereshkovsky 1878).

Type locality: Okhotsk Sea. Distribution: North Pacific; depth unknown.

Sertularella complexa Nutting, 1904.

Type locality: Alaska (exact locality not indicated: Nutting listed Prince William Sound; south of Kodiak Island; south of Unimak Pass; and south of Pribilof Islands). Distribution: Alaskan waters and Sea of Okhotsk; 82–1076 m.

Sertularella conica Allman, 1877.

Type locality: Southwest of Tortugas. Distribution: Eastern North Pacific (Alaska to southern California); western North Atlantic; low tidal zone to 123 m.

Sertularella magna Nutting, 1904.

Type locality: Aleutian Islands. Distribution: Known only from the type locality; 518 m.

Sertularella polyzonias (Linnaeus, 1758). Great tooth hydroid.

Sertularia polyzonias Linnaeus 1758; *Sertularella falsa* Millard 1957.

Type locality: North Atlantic Ocean ("*In Oceano*"). Distribution: Eastern North Pacific (Alaska to southern

California); Bering Sea; western North Pacific; western and eastern North Atlantic; low tidal zone to 130 m.

Sertularella rugosa (Linnaeus, 1758). Snail trefoil hydroid.

Sertularia rugosa Linnaeus 1758; *Ellisia rugosa*: Westendorp 1843.

Type locality: North Atlantic Ocean ("*In Oceano*"). Distribution: Eastern North Pacific (Bering Sea to Washington); western North Pacific (seas of Okhotsk and Japan); Kuril Islands; western North Atlantic (Davis Strait to New York), eastern North Atlantic (Barents, White, North, and Norwegian seas); intertidal zone to 263 m.

Sertularia argentea (Linnaeus, 1758). Squirrel's tail.

Sertularia cupressina var. *argentea* Linnaeus 1758; ?*Sertularia cupressina* Linnaeus 1758; *Thuiaria argentea*: Nutting 1904.

Type locality: North Atlantic Ocean ("*In Oceano*"). Distribution: Widespread boreal Arctic; littoral zone.

Sertularia cupressoides Clark, 1876.

Type locality: Shumagin Islands, Alaska. Distribution: Alaska Peninsula; 10–24 m.

Sertularia mirabilis (Verrill, 1872).

Diphasia mirabilis Verrill 1872; *Selaginopsis mirabilis*: Nutting 1904.

Type locality: North Carolina. Distribution: Eastern North Pacific (Bering Sea south to Washington); western North Pacific (Sea of Japan); Arctic (Barents, White, Norwegian, and Greenland seas); European waters; 13–82 m.

Sertularia similis Clark, 1876.

Type locality: Hagemeister Island, Alaska. Distribution: Alaska; Bering Sea; Chukchi Sea; seas of Okhotsk and Japan; Iceland; western North Atlantic; littoral zone.

Symplectoscyphus elegans (Nutting, 1904).

Sertularella elegans Nutting 1904.

Type locality: South of Unimak Pass, Alaska. Distribution: Known only from type locality; 132 m.

Symplectoscyphus levinseni (Nutting, 1904).

Sertularella levinseni Nutting 1904.

Type locality: South of Unimak Pass, Alaska. Distribution: Known only from type locality; 132 m.

Symplectoscyphus minutus (Nutting, 1904).

Sertularella minuta Nutting 1904.

Type locality: Aleutian Islands. Distribution: Known only from type locality; 518 m.

Symplectoscyphus pinnatus (Clark, 1876).

Sertularella pinnata Clark 1876.

Type locality: Alaska (exact locality not indicated; Clark listed Unalaska, Coal Harbor, Shumagin Islands, and Lituya Bay). Distribution: Bering Sea to central California; Sea of Okhotsk; low tidal zone to 205 m.

Symplectoscyphus tricuspidatus (Alder, 1856).

Sertularia tricuspidata Alder 1856; *Cotulina tricuspidata*: Agassiz 1865; *Sertularella tricuspidata*: Clarke 1876; *Sertularella hesperia* Torrey 1902.

Type locality: England. Distribution: Circumpolar, boreo-Arctic; eastern North Pacific (Alaska to Todos Santos Island, Baja California, Mexico); western North Pacific (Russian to Japan); western North Atlantic (Canada to New England), eastern North Atlantic (Great Britain, Denmark, Iceland, and Greenland); 1–500 m.

Symplectoscyphus turgidus (Trask, 1857).

Sertularia turgida Trask 1857; *Sertularella turgida*: Clark 1876; *Sertularella nodulosa* Calkins 1899; *Symplectoscyphus gotoi* (Stechow 1913).

Type locality: San Francisco Bay, California. Distribution: Eastern North Pacific (Alaska to San Benito Islands and Santa Maria Bay, Baja California, Mexico); ?western North Pacific; intertidal zone to 200 m.

Thuiaria cylindrica Clark, 1876.

Selaginopsis pinnata Mereschkowsky 1878; *Selaginopsis cylindrica* Nutting 1904; *Selaginopsis ornata* Nutting 1904.

Type locality: Alaska (exact locality not indicated; Clark listed Port Moller, Hagemeister island, Bering Sea, Chirikoff Islands, and Chiachi Islands). Distribution: Eastern North Pacific (Bering Sea south to Washington); western North Pacific (Kamchatka, Commander, and Kuril islands); western North Atlantic (Gulf of Maine); 15–630 m.

Thuiaria hartlaubi (Nutting, 1904).

Selaginopsis hartlaubi Nutting 1904.

Type locality: South of Pribilof Islands in the Bering Sea. Distribution: Bering Sea; Pacific side of Aleutian Islands south to Washington; seas of Okhotsk and Japan, Commander and Kuril islands; 23–136 m.

Thuiaria obsoleta (Lepechin, 1781).

Sertularia obsoleta Lepechin 1778; *Selaginopsis obsoleta* Nutting 1904.

Type locality: Not traced. Distribution: North Pacific; depth unknown.

Family Tiarannidae

Stegopoma plicatile (M. Sars, 1863).

Lafoea plicatilis Sars 1863; *Modeeria plicatile* (Sars 1863).

Type locality: Norway. Distribution: Widespread boreal Arctic; littoral to bathyal zones.

Family Tiaropsidae

Tiaropsis multicirrata (M. Sars, 1835).

Thaumantias multicirrata M. Sars 1835; *Thaumantias melanops* Forbes 1848; *Tiaropsis diademtata* L. Agassiz 1849; *Thaumantias pattersonii* Green 1857; *Tyaropsis scotia* Allman 1871; *Thaumantias eschscholtzii* Haeckel 1879.

Type locality: Norway. Distribution: Arctic circumpolar; Bering Sea; depth unknown.

Suborder Proboscoidea

Family Bonneviellidae

Bonneviella regia (Nutting, 1901).

Campanularia regia Nutting 1901; *Bonneviella grandis* Broch 1909 (in part); *Campanularia grandis* Jaderholm 1909 (in part).

Type locality: Orca, Prince William Sound, Alaska. Distribution: Eastern Bering Sea and Aleutian Islands to Washington; western North Pacific in Sea of Japan; Kamchatka; 55–79 m.

Bonneviella superba Nutting, 1915.

Type locality: Bering Sea. Distribution: Known only from type locality; 507 m.

Family Campanulariidae

Campanularia groenlandica Levinsen, 1893.

Campanularia levinseni Shidlovskii 1902.

Type locality: Greenland. Distribution: Circumpolar; Alaska; White, Barents, Kara, Laptev, and Bering seas; seas of Okhotsk and Japan; northern coast of Iceland and western coast of Greenland; 18–525 m; common.

Clytia denticulata (Clark, 1876).

Campanularia denticulata Clark 1876.

Type locality: Port Etches, Alaska. Distribution: Alaska to Tenacatita Bay, Mexico; 15–75 m.

Clytia gracilis (M. Sars, 1850).

Laomedea gracilis Sars 1850; *Gonothyraea gracilis* (Sars 1850); *Clytia cylindrical* Agassiz 1862; *Campanularia pelagica* Van Breemen 1905; *Clytia elsaeoswaldae* Stechow 1914; *Clytia sarsi* Cornelius 1982.

Type locality: Norway. Distribution: Semi-cosmopolitan; known from rocky shores.

Clytia gregaria (Agassiz, 1862).

Oceania gregaria Agassiz 1862; *Phialidium gregarium* (Agassiz 1862).

Type locality: Not traced. Distribution: Gulf of Alaska, Prince William Sound; British Columbia; New Zealand; depth unknown.

Clytia kincaidi (Nutting, 1899).

Campanularia kincaidi Nutting 1899.

Type locality: Puget Sound, Washington. Distribution: Alaska to Baja California, Mexico; Gulf of Mexico; littoral zone.

Gonothyraea loveni (Allman, 1859).

Laomedea loveni Allman 1859; *Laomedea clarkii* Marktanner-Turneretscher 1895; *Gonothyraea clarki* Torrey 1902.

Type locality: Scotland. Distribution: Eastern North Pacific (Alaska south to California); western North Atlantic and eastern North Atlantic; low tidal zone to 124 m.

Laomedea inornata (Nutting, 1901).

Gonothyraea inornata Nutting 1901.

Type locality: Yakutat, Alaska. Distribution: Alaska south to Washington; low tidal zone to 55 m.

Remarks: Cornelius (1975) considered *Laomedea* a junior synonym of *Obelia*, but it is considered valid in the World Hydrozoa database (Schuchert, 2009, 2016).

Obelia dichotoma (Linnaeus, 1758). Sea thread hydroid.

Sertularia dichotoma Linnaeus 1758; *Obelia commissuralis* McCrady 1859; *Obelia australis* von Lendenfeld 1885; *Gonothyrea integra* Nutting 1901; *Obelia cheloniae* Jarvis 1922; *Obelia nodosa* Bale 1924; *Obelia alternata* Fraser 1938; *Obelia biserialis* Fraser 1948.

Type locality: Coast of southwest England. Distribution: Widespread in the Northern Hemisphere; southeast Alaska to California; western and eastern North Atlantic; low tidal zone to 100 m, seldom below 300 m.

Remarks: Cornelius (1975) synonymized many species with *O. dichotoma,* including the three below (*O. dubia, O. longissima, O. plicata*), but they are regarded as valid in the World Hydrozoa database (Schuchert, 2009, 2016).

Obelia dubia Nutting, 1901.

Type locality: Orca, Alaska. Distribution: Southern Alaska to California; low tidal zone to 130 m.

Obelia longissima (Pallas, 1766).

Sertularia longissima Pallas 1766; *Obelia commissuralis* McCrady 1859; *Obelia articulata* (Agassiz 1865); *Obelia flabellata* (Hincks 1866); *Obelia borealis* Nutting 1901; *Obelia corona* Torrey 1904; *Campanularia fasciculata* Fraser 1941; *Laomedea longissima* Broch 1918 (in part).

Type locality: European oceans. Distribution: Cosmopolitan; intertidal and littoral zones.

Obelia plicata Hincks, 1868.

Type locality: Great Britain. Distribution: Eastern North Pacific; North Atlantic; depth unknown.

Orthopyxis integra (MacGillivray, 1842).

Campanularia integra Macgillivray 1842; *Clytia ryckholtii* Westendorp 1843; *Campanularia laevis* Couch 1844; *Orthopyxis calculata* (Hincks 1853); *Clytia poterium* Agassiz 1862; *Orthopyxis compressa* (Clark 1876); *Campanularia integriformis* Marktanner-Turneretscher 1890; *Campanularia ritteri* Nutting 1901.

Type locality: Aberdeen, Scotland. Distribution: Eastern North Pacific from the Bering Sea and Aleutian Islands south to southern California; western and eastern North Atlantic; Iceland; New Zealand; low tidal zone to 439 m.

Remarks: Molecular data indicates that this species is not monophyletic (Govindarajan et al., 2006).

Rhizocaulus verticillatus (Linnaeus, 1758). Horsetail hydroid.

Sertularia verticillata Linnaeus 1758; *Campanularia verticillata* Fraser 1914.

Type locality: North Atlantic Ocean ("*Habitat in Oceano*"). Distribution: Cosmopolitan; intertidal and littoral zones.

Order Limnomedusae

Family Monobrachiidae

Monobrachium parasitum Mereschkowsky, 1877.

Type locality: Unknown. Distribution: Alaska to Baja California, Mexico; Japan, Okhotsk Sea; Greenland; Spitsbergen; Barents Sea, Chukchi Sea, Kara Sea, and White Sea; 30–200 m.

Remarks: This species is commensal on bivalves and foraminiferans.

Family Olindiasidae

Eperetmus typus Bigelow, 1915.

Type locality: Gulf of Alaska. Distribution: Gulf of Alaska to Oregon; occurs in shallow waters.

Gonionemus vertens Agassiz, 1862. Clinging jellyfish.

Haleremita cumulans Schaudinn 1894; *Gonionemus murbachii* Mayer 1901; *Gonionemus agassizii* Murbach and Shearer 1902; *Gonionemus depressum* Goto 1903; *Gonionemus vindobonensis* Joseph 1918; *Gonionemus oshoro* Uchida 1929.

Type locality: Gulf of Georgia, British Columbia. Distribution: Circumboreal; Alaska to central California; China and Japan; western and eastern North Atlantic; occurs in brackish coastal waters; depth unknown.

Order Narcomedusae

Family Aeginidae

Aegina citrea Eschscholtz, 1829.

Aegina rosea Eschscholtz 1829.; *Cunarcha aeginoides* Haeckel 1879; *Aegina rhodina* Haeckel 1879; *Aegina canariensis* Haeckel 1879; *Aegina eschscholtzii* Haeckel 1879; *Solmundus tetralinus* Haeckel 1879; *Aegina lactea* Vanhöffen 1908; *Aegina brunnea* Vanhöffen 1908; *Aegina alternans* Bigelow 1909; *Aegina pentanema* Kishinouye 1910; *Aegina aeginoides*: Mayer 1910.

Type locality: Eastern North Atlantic. Distribution: Western North Pacific; eastern North Pacific (Bering Sea to California); eastern and western North Atlantic; Indian Ocean; Antarctica; depth unknown.

Aeginopsis laurentii Brandt, 1838.

Type locality: Bering Strait. Distribution: Widespread in the Arctic, including the Chukchi and Beaufort seas; Japan Sea; Sea of Okhotsk; Bering Sea; northern California; Northwest Atlantic; depth unknown.

Family Cuninidae

Solmissus incisa (Fewkes, 1886).

Solmaris incisa Fewkes 1886; *Solmaris rhodoloma* Vanhöffen 1908 (non *Aequorea rhodoloma* Brandt 1838).

Type locality: Gulf Stream. Distribution: Aleutian Islands and Gulf of Alaska to California; Peru; Ecuador; Gulf of Panama; Kuril Islands; Atlantic and Indian oceans; depth unknown.

Solmissus marshalli Agassiz and Mayer, 1902.

Solmaris punctatus Mayer 1906 (non *Aequorea punctata* Quoy et Gaimard 1824); *Solmaris flavescens* Vanhöffen 1908 (non *Pachysoma flavescens* Kölliker 1853).

Type locality: Kwajalong Atoll, Marshall Islands, North Pacific. Distribution: North Pacific; eastern South Pacific; Indian Ocean; Indo-Pacific; depth unknown.

Order Trachymedusae

Family Halicreatidae

Botrynema brucei Browne, 1908.

Halicreas glabrum Mayer 1910; *Botrynema ellinorae* Bigelow 1913.

Type locality: Cape Horn, South America. Distribution: Bering Sea to southern Alaska; western and eastern North Atlantic; Antarctica; occurs in deep waters.

Halicreas minimum Fewkes, 1882.

Halicreas papillosum Vanhoffen 1902.

Type locality: New England. Distribution: Bering Sea; western North Pacific and southeastern Pacific; western and eastern North Atlantic; Indian Ocean; Antarctica; occurs in deep waters.

Family Ptychogastriidae

Ptychogastria polaris Allman, 1878.

Pectyllis arctica Haeckel 1879; *Ptychogastria opposita* Vanhoffen 1912.

Type locality: East Greenland. Distribution: Arctic-boreal, possibly bipolar; 10–2500 m.

Family Rhopalonematidae

Aglantha digitale (O.F. Müller, 1776). Pink helmet.

Medusa digitale O.F. Müller 1776; *Melicerta digitale:* Peron and Lesueur 1809; *Eirene digitale* Eschscholtz 1829; *Circe rosea* Forbes 1848; *Trachynema digitale:* A. Agassiz 1865; *Aglantha conica* Hargitt 1902; *Aglaura hemistoma* var. *laterna* Sverdrup 1921; *Aglantha digitale* var. *intermedia* Foerster 1923; *A. digitale* var. *rosea* Coy 1924.

Type locality: West Greenland. Distribution: Arctic Ocean; eastern North Pacific (Alaska to Washington); western North Pacific; North Atlantic; depth unknown.

Crossota rufobrunnea (Kramp, 1913).

Aglantha rufobrunnea Kramp 1913; *Crossota brunnea* var.

norvegica Bigelow 1913; *Crossota norvegica* Kramp 1920; *Crossota brunnea* Thiel 1936 (in part, non *C. brunnea* Vanhöffen 1902), Bigelow 1938 (in part), Naumov 1956, 1960 (in part).

Type locality: Davis Strait. Distribution: Eastern and western North Pacific; western North Atlantic; occurs in shallow waters.

Pantachogon haeckeli Maas, 1893.

Pantachogon hackelii Maas 1893; *Pantachogon rubrum* Vanhoffen 1902; *Pantachogon scotti* (in part), *Homoeonema typicum* and *militare, Colobononema sericeum* Thiel 1936.

Type locality: Southwest of Iceland. Distribution: Eastern and western North Pacific; North Atlantic; Indian Ocean; occurs in deep waters.

Order Siphonophorae

Suborder Calycophorae

Family Clausophyidae

Chuniphyes multidentata Lens and Riemskijk, 1908.

Chuniphyes multicristata Bigelow and Sears 1937 (*lapsus calamae*).

Type locality: Indonesia. Distribution: Southeast Alaska to Baja California, Mexico; northern and southeastern Atlantic; Indian Ocean; Indo-Pacific; 200–700 m.

Family Diphyidae

Dimophyes arctica (Chun, 1897).

Diphyes arctica Chun 1897; *Eudoxia arctica*: Chun 1897; *Diphyes borealis* Chun 1897; *Muggiaea arctica*: Schneider 1898; *Eudoxia eschscholtzi* Johannsen and Levinsen 1903 (non Bush 1851; = *Muggiaea kochi*).

Type locality: Eastern North Atlantic. Distribution: ?Cosmopolitan; occurring at all depths; common.

Lensia conoidea (Keferstein and Ehlers, 1860).

Diphyes conoidea Kefferstein and Ehlers 1860; *Diphyes truncata* Sars 1846 (non *D. truncata* Quoy and Gaimard 1827); *Galeolaria truncata*: Huxley 1859 *et auctt.*; *Epibulia truncata*: Haeckel 1888; *Diphyes appendiculata* Vanhoffen 1906 (in part, non Eschscholtz 1829); *Lensia truncata*: Totton 1932; *Lensia conoidea pacifica* Stepanjants 1967.

Type locality: Messina, Italy. Distribution: Eastern North Pacific (southern Alaska); North Atlantic; southwestern Atlantic; Indian Ocean; 200–600 m.

Muggiaea kochi (Will, 1844).

Diphyes kochii Will 1844; *Muggiaea pyramidalis* Busch 1851; *Monophyes primordialis* Claus 1874.

Type locality: Eastern North Atlantic. Distribution: Southeast Alaska; southeastern Pacific; eastern North and southwestern Atlantic; Indian Ocean; depth unknown.

Family Prayidae

Rosacea plicata Bigelow, 1911.

Hippopodius hippopus Bigelow 1911; *Praya cymbiformis* Moser 1915 (in part), Moser 1920 (in part), Browne 1926 (in part, non *P. cymbiformis* Leuckart 1853); *Praya diphyes* Moser 1925 (in part).

Type locality: Bay of Biscayne. Distribution: Cosmopolitan from the Bering Sea to the Antarctic, including the tropics; widely distributed in the Atlantic, Indian, and Antarctic oceans; 300–500 m.

Suborder Physonectae

Family Agalmatidae

Agalma elegans (M. Sars, 1846).

Agalmopsis elegans Sars 1846; *Agalmopsis sarsi* Kölliker 1853; *Agalma clavata* Leuckart 1853; *Agalma sarsii* Fewkes 1880; *Cuneolaria elegans* Haeckel 1888; *Agalmopsis catena* Haeckel 1888.

Type locality: Norway. Distribution: Cosmopolitan; shallow to deep waters, more common in the upper 100 m.

Family Physophoridae

Physophora hydrostatica Forskaal, 1775.

Physophora myzonema Péron and Lesueur 1807; *Discolabe mediterranea* Eschscholtz 1829; *Physophora philippi* Kölliker 1853; *Physophora borealis* Sars 1877; *Discolabe quadrigata* Haeckel 1888.

Type locality: Mediterranean Sea. Distribution: Cosmopolitan but more common in the Atlantic; depth unknown.

Class Anthozoa—Hard Corals, Soft Corals, Black Corals, Sea Fans, Sea Pens, and Sea Anemones

The anthozoans include the hard corals, soft corals, black corals, sea fans, sea pens, and sea anemones. They are distinguished from the other cnidarian classes by the lack of any trace of a medusoid stage in their life cycle. More than 6100 species are known worldwide (Crowther, 2011), with approximately 120 species represented in Alaskan waters (Table 1).

The Aleutian Islands have a very rich octocoral fauna, and are distinctive in that primnoids account for 61% of the diversity (Cairns, 2011a); 63% are endemic to the Aleutian Islands-Bering Sea region (Cairns, 2011a). Although Clark[2] listed several undescribed species of the primnoid genus *Amphilaphis*, Cairns and Bayer (2009) record this genus only in the Antarctic, Hawaii, Galapagos Islands, Bouvet Island, and Tristan de Cunha. Cairns (2011a:7) stated, "The species listed as *Amphilaphis* A, B, and C by Heifetz (2002), Heifetz et al. (2005), and Stone and Shotwell (2007) may be the species of *Plumarella* (or *Thouarella*) discussed below." *Amphilaphis* sp. recorded in Wing and Barnard (2004) might be *Plumarella (Dicholaphis) hapala* (Cairns, 2011a).

The octocorals and in particular those species with a more upright habit may be vulnerable to trawling activity (Althaus et al., 2009). Ocean acidification and climate change may especially affect reef-building species in tropical regions (Stone and Shotwell, 2007); however little empirical evidence is available to assess the susceptibility of Alaskan corals (Heifetz et al., 2005; Stone and Shotwell, 2007).

The sea anemone fauna from Alaskan waters is poorly known, with very few references citing precise locality data or voucher specimens. Guide books typically list the same few easily identifiable intertidal or shallow subtidal species, with no mention of deeper-water fauna. This paucity of information is not surprising; identifying sea anemones can be very difficult, often requiring histological preparations and high-power microscopes to examine the cnidae. Almost certainly, undescribed species of actiniarians and zoanthids exist in Alaska. Only one species of zoanthid is currently known to occur in Alaska, but Reimer and Sinniger (2010) described one new species of zoanthid from British Columbia and suggested there may be two, and possibly four, new species from British Columbian waters. It appears likely that this undescribed diversity extends into Alaskan waters.

Some of the most common species have been the subject of intense taxonomic scrutiny and have thus resulted in extensive synonymies (e.g. *Metridium* spp.). One genus is still under such scrutiny and requires a brief taxonomic note. The genus *Urticina* Ehrenberg, 1834 was originally applied to Atlantic species. Hand (1955) applied several of the same names to species found commonly along the Pacific Coast of North America (under the genus *Tealia*). The Atlantic and Pacific species are not the same, and new names are required for the Pacific species (den Hartog, 1986). Sanamyan and Sanamyan (2006) described new species of *Urticina* from the western Pacific and applied the name *Urticina grebelnyi* to what is currently considered *U. crassicornis* in the eastern Pacific. They did not examine any specimens from the eastern Pacific, and Fautin (2011) has assigned "unknown" status to *U. grebelnyi*, not recognizing it as a valid species. The species of *Urticina sensu* Hand (1955) are widely used and so have been included here, awaiting a taxonomic revision of the genus.

All primary taxonomic and distributional references for the hexacorallians of the world have been compiled into a searchable online database (Fautin, 2011), providing synonymy and type specimen information as well. This is an invaluable resource, used extensively to compile the list of species presented here. In some cases, however, species commonly encountered during AFSC fisheries surveys are not known to occur in Alaska from the literature. In these cases voucher specimens from the California Academy of Sciences are cited (which may be considered range extensions for these species). General distribution information is submitted in reference to Alaskan waters, with precise localities given when possible. Broader distributions are included if no specific Alaskan localities were available. Common names, when available, are taken from Cairns et al. (2002). Higher classification follows Fautin (2011).

Several sources of primary and secondary literature were used to compile the information for the list of anthozoans: Broch (1935), Cairns (1994, 2011a), Opresko (2001a,b, 2005), Sanchez and Cairns (2004), Wing and Barnard (2004), Cairns and Bayer (2005, 2009), Heifetz et al. (2005), Williams (2005), Sanchez (2005), Cairns and Baco (2007), Etnoyer (2008), Herrera et al. (2010), and Eash-Loucks and Fautin (2012).

Subclass Octocorallia

Order Alcyonacea (soft corals, sea fans and sea whips, and stoloniferans)

Suborder Stolonifera

Family Clavulariidae

Clavularia armata Thomson, 1927.
Type locality: Eastern North Atlantic. Distribution: Alaska; eastern North Atlantic; type material collected at 1153 and 1600 m.

Clavularia eburnea Kükenthal, 1906.
Type locality: Japan. Distribution: Alaska; Japan; depth unknown.

Clavularia morbesbii Hickson, 1915.
Type locality: Moresby Island, British Columbia. Distribution: Southern Alaska to British Columbia; type material collected at 183 m.

?*Clavularia peterseni* Kükenthal, 1906.
Type locality: Japan. Distribution: Alaska; Japan; depth unknown.

Sarcodictyon sp.
Distribution: Aleutian Islands, Sea of Okhotsk; 50–335 m; uncommon.

Suborder Alcyoniina (soft corals)

Family Alcyoniidae

Alcyonium pacificum Yamada, 1950.
Type locality: Northern Japan. Distribution: Alaska; Japan; depth unknown.

Heteropolypus japonicus (Nutting, 1923).
Anthomastus japonicas Nutting 1923.
Type locality: Japan. Distribution: Alaska; Japan; depth unknown.

Heteropolypus ritteri (Nutting, 1909).
Anthomastus ritteri Nutting 1909.

Type locality: Santa Barbara Island, California. Distribution: Southern Alaska to California; 395–1244 m.

Family Nidaliidae

?*Scleronephthya gracillimum* (Kükenthal, 1906).

Alcyonium gracillimum Kükenthal 1906.

Type locality: Japan. Distribution: Alaska; Japan; depth unknown.

Family Nephtheidae

Gersemia fruticosa M. Sars, 1860. Arctic or White Sea soft coral.

Eunephthea fruticosa (Sars 1860); *Nidalia arctica* Danielssen 1887; *Gersemia longiflora* Verrill 1922.

Type locality: Norway. Distribution: Circumpolar and boreal; depth unknown.

Gersemia lambi Williams, 2013.

Type locality: Langara Island, British Columbia, Canada. Distribution: Cape Ommaney, Southeast Alaska, to central British Columbia; 9–20 m.

Gersemia rubiformis (Ehrenberg, 1834). Sea strawberry.

Lobularia rubiformis Ehrenberg 1834; *Capnella rubiformis* (Ehrenberg 1834); *Eunephthya rubiformis* (Ehrenberg 1834).

Type locality: Northern seas ("*E mari septentrionalis*"). Distribution: Circumboreal; Chukchi Sea to California; western North Pacific; North Atlantic; littoral zone; common.

Suborder Scleraxonia

Family Anthothelidae

?Anthothela grandiflora (M. Sars, 1856). Purple soft coral.

Briareum grandiflorum M. Sars 1856; *Anthothela insignis* Verrill 1879.

Type locality: Norway. Distribution: Circumboreal; south to the Aleutian Islands; 50–466 m.

Family Coralliidae

Corallium regale Bayer, 1956.

Type locality: French Frigate Shoal, Hawaii. Distribution: Gulf of Alaska; Hawaii; 708–722 m.

Family Paragorgiidae

Paragorgia arborea (Linnaeus, 1758). Bubble gum coral or Kamchatka coral.

Paragorgia nodosa Koren and Danielsen 1883; *Paragorgia pacifica* Verrill 1922.

Type locality: Unknown. Distribution: Semi-cosmopolitan (bipolar); 30–1000+ m; common.

Suborder Holaxonia

Family Acanthogorgiidae

Calcigorgia beringi (Nutting, 1912). Bering red sea fan.

Leptogorgia beringi Nutting 1912; *Swiftia beringi* (Nutting 1912).

Type locality: Off Amlia Island, Aleutian Islands (52°01′N, 174°39′E). Distribution: Eastern Bering Sea to the Gulf of Alaska; >400 m; rare.

Calcigorgia spiculifera Broch, 1935. Pink sea fan.

Type locality: Not traced. Distribution: Bering Sea to British Columbia; western North Pacific; 20–100+ m; common.

Family Plexauridae

Alaskagorgia aleutiana Sanchez and Cairns, 2004. Aleutian gorgonian.

Type locality: Tanaga Pass, Delarof Islands, Aleutian Islands. Distribution: Aleutian Islands; 125–512 m; common.

Cryogorgia koolsae Williams, 2005.

Type locality: Eastern Aleutian Islands (52.25°N, 171.70°W). Distribution: Central Aleutian Islands; 83–406 m; common.

?***Euplexaura marki*** Kükenthal, 1913.

Type locality: Not traced. Distribution: Gulf of Alaska to California; depth unknown.

Muriceides cylindrica Nutting, 1912. Long-polyp sea fan.

Type locality: Aleutian Islands (52°14′30″N, 174°13′E). Distribution: Aleutian Islands; Ose Saki Light; 50–885 m; uncommon.

Muriceides nigra Nutting, 1912. Purple sea fan.

Type locality: East Cape, Attu Island, Aleutian Islands. Distribution: Aleutian Islands; 50–400 m; common.

Psammogorgia simplex Nutting, 1909. Red licorice sea fan.

Swiftia simplex (Nutting 1909).

Type locality: Point San Pedro, Santa Cruz Island, California. Distribution: Aleutian Islands to California; 200–800+ m; uncommon.

Swiftia pacifica (Nutting, 1912). Pacific red sea fan.

Callistephanus pacificus Nutting 1912; *Callistemanus pacifica* (Nutting 1912).

Type locality: Aleutian Islands (52°14′30″N, 174°13′E). Distribution: Bering Sea to California; 18–790 m; uncommon.

Family Primnoidae

Arthrogorgia kinoshitai Bayer, 1952. Kinoshita's armored sea fan.

Calyptrophora ijimai: Broch 1935, 1940; ?*Arthrogorgia ijimai*: Stone and Shotwell 2007 (listed).

Type locality: West of Agattu Island, Near Islands, Aleutian Islands. Distribution: Western Aleutian Islands from Near Islands to Tanaga Pass; Sea of Okhotsk; 220–1309 m.

Arthrogorgia otsukai Bayer, 1952. Otsuka's armored sea fan.

Type locality: Between Aangan River, Kamchatka and Bowers Bank. Distribution: Amchitka Pass and south of Kanaga Island, Aleutian Islands; 1359–1372 m.

Arthrogorgia utinomii Bayer, 1996. Utinomi's armored sea fan.

Type locality: Seguam Island. Distribution: Aleutian Islands from the Near Islands to Amuka Island; 163–882 m, most common at 250–700 m.

Calyptrophora laevispinosa Cairns, 2007.

Type locality: Gorda Flow off Washington. Distribution: Gulf of Alaska (Derickson, Patton, Giacomini, and Welker seamounts); 2672–3531 m.

Fanellia compressa (Verrill, 1865). Giant fanellia.

?*Prymnoa verticillaris*: Ehrenberg 1834 (non *Gorgonia verticillata* Pallas 1766); *Primnoa compressa* Verrill 1865; *Calligorgia compressa*: Studer 1878, Heifetz 2002 (listed).

Type locality: Aleutian Islands. Distribution: Aleutian Islands from Near Islands to Islands of Four Mountains; 82–1061 m, most common at 150–300 m.

Fanellia fraseri (Hickson, 1915). Fraser's fanellia.

?*Prymnoa verticillaris*: Ehrenberg 1834 (non *Gorgonia verticillata* Pallas 1766); *Caligorgia fraseri* Hickson 1915, 1917 (listed); ?*Fanellia compressa*: Wing and Barnard 2004.

Type locality: Albatross and Portland banks, just east of Kodiak Island, Gulf of Alaska. Distribution: Amchitka Pass to the Portlock Bank east of Kodiak Island; 86–1341 m, most common at 100–150 m.

Narella abyssalis Cairns and Baco, 2007.

Type locality: Derickson Seamount, Gulf of Alaska. Distribution: Known only from type locality; 4594 m.

Narella alaskensis Cairns and Baco, 2007.

Type locality: Welker Seamount, Gulf of Alaska. Distribution: Chirikof, Murray, Welker, Denson, and Dickins seamounts, Gulf of Alaska; 2377–3075 m.

Narella arbuscula Cairns and Baco, 2007.

Type locality: Derickson Seamount, Gulf of Alaska. Distribution: Derickson and Giacomini seamounts, Gulf of Alaska; 2775–3465 m.

Narella bayeri Cairns and Baco, 2007.

Type locality: Derickson Seamount, Gulf of Alaska. Distribution: Derickson Seamount and a seep west of that seamount, Gulf of Alaska; 3277–4091 m.

Narella cristata Cairns and Baco, 2007.

Type locality: Derickson Seamount, Gulf of Alaska. Distribution: Known only from type locality; 3385 m.

Parastenella doederleini (Wright and Studer, 1889).

Stenella doederleini Wright and Studer 1889; *Stenella (Parastenella) doederleini*: Versluys 1906; *Candidella (Parastenella) doederleini*: Bayer 1956.

Type locality: Yokohama, Japan. Distribution: Adak Canyon, Aleutian Islands; Japan; Indonesia; 400–3423 m; uncommon.

Parastenella gymnogaster Cairns, 2007.

Type locality: Welker Seamount off British Columbia. Distribution: Seamounts off Oregon and British Columbia, Gulf of Alaska; Juan de Fuca Ridge off Oregon; 1962–2869 m; uncommon.

Parastenella ramosa (Studer, 1894).

Stenella ramosa Studer 1894; *Stenella doederleini*: Studer 1894; *Stenella (Parastenella) ramosa*: Versluys 1906.

Type locality: Gulf of Panama. Distribution: Gulf of Alaska (Giacomini, Pratt, Murray, and Warwick seamounts); Adak Canyon; Pip Volcano (Commander Islands, off Kamchatka, Russia); Gulf of Panama; various seamounts off western United States and Canada (e.g., Rodriguez, Davidson, Axial 1998 South Flow, Welker, and Dickins); 665–1766 m; uncommon.

Plumarella (Dicholaphis) aleutiana Cairns, 2011.

?*Thouarella* sp. Wing and Barnard 2004.

Type locality: Beyer Bay, Adak Island, Aleutian Islands. Distribution: Throughout the Aleutian Islands from Near Island in the west to Unalaska to the east; Pribilof Canyon, Bering Sea; 79–517 m; common.

Plumarella (Dicholaphis) echinata Cairns, 2011.

Plumarella spinosa: Nutting 1912 (in part).

Type locality: Gareloi Island, Delarof Islands, Aleutian Islands. Distribution: Aleutian Islands from Buldir Reef, Rat Islands to Amukta Pass, and Bowers Bank; 150–1692 m.

Plumarella (Dicholaphis) hapala Cairns, 2011.

?*Amphilaphis* sp. Wing and Barnard 2004.

Type locality: Buldir Reef, west of Kiska Island, Aleutian Islands. Distribution: Throughout the Aleutian Islands from western Rat Islands to Islands of Four Mountains; 120–384 m.

Plumarella (Dicholaphis) nuttingi Cairns, 2011.

Type locality: Kanaga Island, Andreanof Islands, Aleutian Islands. Distribution: Aleutian Islands from Amchitka Pass to Great Sitkin Island; 492–888 m.

Plumarella* (*Dicholaphis*) *profunda Cairns, 2011.

Type locality: South of Kanaga Island, Aleutian Islands. Distribution: Known only from type locality; 2514 m.

Plumarella* (*Dicholaphis*) *robusta Cairns, 2011.

Type locality: Amchitka Pass, Aleutian Islands. Distribution: Aleutian Islands from Amchitka Pass to Adak Canyon; 712–1061 m.

Plumarella* (*Plumarella*) *spicata Nutting, 1912.

Plumarella spicata Nutting 1912; *Plumarella spinosa*: Nutting 1912 (in part), Heifetz 2002 (listed), Wing and Barnard 2004 (listed), Heifetz et al. 2005 (listed), Stone and Shotwell 2007 (listed).

Type locality: Passage between Near Islands and Rat Islands, Aleutian Islands. Distribution: Aleutian Islands from Near Islands to Adak Canyon, including Bowers Bank; 712–1912 m.

Plumarella* (*Dicholaphis*) *superba (Nutting, 1912).

Primnodendron superbum Nutting 1912; *Thouarella striata*: Nutting 1912, Heifetz 2002 (listed), Wing and Barnard 2004 (listed), Heifetz et al. 2005 (listed), Stone and Shotwell 2007 (listed); *Thouarella (Amphilaphis) superba*: Kükenthal 1919, 1924; *Thouarella superba*: Wing and Barnard 2004, Heifetz et al. 2005 (listed), Stone and Shotwell 2007 (listed); *Thouarella (Thouarella) superba*: Cairns and Bayer 2009 (listed).

Type locality: Petrel Bank, north of Semisopochnoi Island, Aleutian Islands. Distribution: Aleutian Islands from eastern Near Islands to Umnak Island, including Petrel Bank and Pribilof Canyon; southeastern Sakhalin Island; 29–1258 m.

Primnoa pacifica Kinoshita, 1907. Pacific red tree coral.

Primnoa resaedaformis pacifica: Heifetz et al. 2005.

Type locality: Mochiyama, Sagami Bay, Japan. Distribution: Amchitka Pass, Aleutian Islands; Zhemchug Canyon, Bering Sea; Alaska to La Jolla, California; seas of Japan and Okhotsk; 9–800 m; common.

Primnoa pacifica* var. *willeyi Hickson, 1915. Willey's red tree coral.

Primnoa willeyi Hickson 1915; *Primnoa resaedformis willeyi*: Heifetz et al. 2005.

Type locality: Moresby Island, British Columbia. Distribution: Rat Islands, Aleutian Islands to British Columbia; 27–863 m; common.

Primnoa wingi Cairns and Bayer, 2005.

Type locality: North of Amlia Island, Andreanof Islands, Aleutian Islands. Distribution: Aleutian Islands from Near Islands to Amukta Pass, Chatham Strait; Zhemchug Canyon, Bering Sea; 110–914 m; uncommon.

Thouarella cristata Cairns, 2011.

?*Plumarella* sp: Wing and Barnard 2004.

Type locality: Southern Bowers Bank. Distribution: Rat Islands, Aleutian Islands; southern Bowers Bank; 94–768 m; rare.

Thouarella trilineata Cairns, 2011.

Type locality: Northwest of Carlisle Island, Islands of Four Mountains, Aleutian Islands. Distribution: Aleutian Islands from Amchitka Pass to Unalaska; 97–642 m; common.

Suborder Calcaxonia

Family Isididae (bamboo corals)

Isidella tentaculum Etnoyer, 2008.

Type locality: Dickens Seamount, Gulf of Alaska (54°30.85′N, 136°54.55′W). Distribution: Eastern Bering Sea; eastern North Pacific seamount peaks and continental slopes from the Aleutian Islands in the north to Rodriguez Seamount in the south; near the Channel Islands, off southern California; 720–1050 m.

Keratoisis paucispinosa (Wright and Studer, 1889).

Ceratoisis paucispinosa Wright and Studer 1889; *Isidella paucispinosa* (Wright and Studer 1889); *Lepidisis paucispinosa* (Wright and Studer 1889).

Type locality: Japan. Distribution: Alaska; Japan; type material collected at 631 m.

?***Keratoisis philippinensis*** (Wright and Studer, 1889).

Ceratoisis philippinensis Wright and Studer 1889; *Lepidisis philippinensis* (Wright and Studer 1889).

Type locality: Philippines. Distribution: North Pacific; type material collected at 150 m.

Keratoisis profunda (Wright, 1885).

Bathygorgia profunda Wright 1885.

Type locality: Between Yokohama and the Hawaiian Islands. Distribution: North Pacific; type material collected at 4206 m.

Order Pennatulacea (sea pens and sea pansies)

Suborder Subsessiliflorae

Family Halipteridae

Halipteris californica (Moroff, 1902).

Pavonaria californica Moroff 1902; *Balticina californica*: Nutting 1912; *Balticina pacifica* Nutting 1909; *Halipteris contorta* Nutting 1909; *Stachyptilum quadridentatum* Nutting 1909.

Type locality: California. Distribution: Aleutian Islands and Gulf of Alaska to California; ≥200 m.

Halipteris willemoesi Kölliker, 1870. Giant sea whip.

Type locality: Not traced. Distribution: Bering Sea, Aleutian Islands and Gulf of Alaska to northern Washington, perhaps to southern California; subtidal, >20 m.

Family Pennatulidae

Pennatula phosphorea Linnaeus, 1758. Deep-sea sea pen.
Type locality: North Atlantic Ocean ("*Habitat in Oceano*"). Distribution: Circumboreal; eastern North Pacific, south to California; 800–3000 m; common.

Ptilosarcus gurneyi (Gray, 1860). Orange sea pen.
Sarcoptilus gurneyi Gray 1860; *Leioptilus gurneyi* (Gray 1860); *Pennatula tenua* Gabb 1862; *Pennatula tenuis*: Gray 1870; *Ptilosarcus quadrangularis* Moroff 1902; *Leioptilus quadrangulare*: Flora 1966; *Ptilosarcus verrilli* Boone 1933.
Type locality: Monterey, California. Distribution: Northern Alaska and Aleutian Islands to Baja California, Mexico; subtidal zone to 135 m; common.

Family Virgulariidae

Stylatula elongata (Gabb, 1862). Slender sea pen.
Virgularia elongata Gabb 1862.
Type locality: San Francisco Bay, California. Distribution: Southern Alaska to Panama; 30–100 m; common.

Stylatula gracilis (Gabb, 1864).
Virgularia gracilis Gabb 1864.
Type locality: Cape St. Lucas, California. Distribution: Southern Alaska to California; littoral zone; common.

Suborder Sessiliflorae

Family Anthoptilidae

Anthoptilum grandiflorum (Verrill, 1879). Fleshy sea pen.
Virgularia grandiflorum Verrill 1879; *Anthoptilum thompsoni* Köllicker 1880.
Type locality: Eastern coast of North America (42°46′N, 63°45′W). Distribution: Southern Alaska to southern California; western Pacific; North Atlantic; deep water (type material collected at 402–475 m); common.

Anthoptilum murrayi Kölliker, 1880. Murray's sea pen.
Type locality: Not traced. Distribution: Circumboreal; eastern North Pacific, south to Washington; below 1000 m; common.

Family Umbellulidae

Umbellula lindahli Kölliker, 1875.
Type locality: Not traced. Distribution: Cosmopolitan, including southeast Alaska; deep water (>1000 m).

Family Veretillidae

Cavernularia vansyoci Williams, 2005.
Type locality: Aleutian Islands (52.0663° to 52.07043°N; 175.30231° to 175.2824°W). Distribution: Known only from type locality; 86–93 m.

Subclass Ceriantipatharia

Order Antipatharia (black corals)

Family Cladopathidae

Chrysopathes speciosa Opresko, 2003. Black tree coral.
Type locality: Oregon. Distribution: Eastern Bering Sea to California; >400 m; uncommon.

Family Schizopathidae

Bathypathes alternata Brook, 1889. Alternating quill pen coral.
Type locality: 36°10′N, 178°0′E. Distribution: Cosmopolitan; deep water, >800 m, type material collected at 3749 m; uncommon.

Bathypathes patula Brook, 1889. Quill Pen Coral.
Type locality: Central North Pacific (35°22′N, 169°53′W). Distribution: Cosmopolitan; type material collected at 5304 m; uncommon.

Dendrobathypathes boutillieri Opresko, 2005.
Type locality: Graham Island, Queen Charlotte Islands, British Columbia. Distribution: Gulf of Alaska; 1707–2109 m; rare.

?***Lillipathes lilliei*** (Totton, 1923). Lillie's black coral.
Antipathes lilliei Totton 1923.
Type locality: New Zealand. Distribution: Cosmopolitan, including the Bering Sea to the Gulf of Alaska; deep water, >800 m; uncommon.

Lillipathes wingi Opresko, 2005.
Type locality: 54°54′N, 134°17.2′W to 54°57.7′N, 134°21.2′W. Distribution: Numerous localities off the Pacific coast of Alaska and Canada; 518–1192 m.

Subclass Hexacorallia (sea anemones and true corals)

Order Actiniaria (sea anemones)

Suborder Nynanthae

Infraorder Athenaria

Family Edwardsiidae

Edwardsia sipunculoides (Stimpson, 1853). Sipunculid-like-anemone.
Actinia sipunculoides Stimpson 1853; *Edwardsia sipunculoides* Stimpson 1853: Verrill 1864; *Edwardsiella sipunculoides* Stimpson 1853: Andres 1883.
Type locality: Canada, New Brunswick, Grand Manan, 0 m.

Distribution: Torrey (1902) cites Alaska, Aleutian Islands, Unalaska, Dutch Harbor; depth unknown.

Nematostella vectensis Stephenson, 1935. Starlet anemone.

Nematostella vectensis Stephenson 1935; *Nematostella pellucida* Crowell 1946.

Type locality: UK, England, Isle of Wight, Bembridge, 0 m.

Distribution: Austin (1985) listed this species with a circumpolar distribution, south to central California, littoral zone, brackish waters.

Family Halcampoididae

Halcampoides purpureus (Studer, 1879).

Halcampa purpurea Studer 1879; *Halcampa clavus* Hertwig 1882; *Fenja mirabilis* Danielssen 1887; *Aegir frigidus* Danielssen 1887; *Halcampa kerguelensis* Hertwig 1888; *Halcampoides abyssorum* Danielssen 1890; *Halcampa abyssorum* Danielssen 1890; *Aegir frigidus* Danielssen: Carlgren 1895; *Halcampa septentrionalis* Pax 1912; *Halcampoides purpurea* (Studer 1879) Carlgren: Carlgren 1921; *Halcampoides kerguelensis* Pax 1922; *Halcampoides macrodactyla* Pax 1922.

Type locality: Kerguelen, 11–183 m. Distribution: Carlgren (1940) cited Punuk Island, Bering Sea, 27 m.

Family Haloclavidae

Peachia parasitica (Agassiz, 1859). Parasitic anemone.

Bicidium parasiticum Agassiz 1859; *Peachia parasitica* Verrill: Verrill 1866; *Philomedusa parasitica* Agassiz 1859: Andres 1883; *Bicidium parasitica* Agassiz 1859: Hargitt 1912; *Siphonactinia parasitica* (Agassiz 1859): Verrill 1922; *Bicidiopsis tubicola* Verrill 1922; *Bicidiopsis arctica* Verrill 1922; *Peachia quinquepunctata* McMurray: Carlgren 1940 [questionable synonymy Fautin, 2011].

Type locality: Massachusetts, Nahant. Distribution: Carlgren (1940) cited Alaska, Nunivak Island, Nash Harbor; depth unknown.

Family Diadumenidae

Diadumene lineata (Verrill, 1869). Orangestriped green anemone.

Actinia chrysosplenium W.P. Cocks in Johnston 1847; *Sagartia lineata* Verrill 1869 (1870); *Sagartia pustulata* McMurrich 1887; *Sagartia Luciae* Verrill 1898; *Sagartia luciae* Verill 1898: Parker 1900; *Sagartia davisi* Torrey and Mery 1904; *Sagartia luciae* Verrill 1898: Walton 1908; *Diadumene luciae* (Verill 1898): Carlgren 1927; *Diadumene luciae* Verrill (1898): Pax 1928; *Diadumene Luciae* (Verrill 1898): Uchida 1932; *Diadumen Luciae* Verrill 1898: Collings 1938; *Aiptasiomorpha luciae* (Verrill, 1899): Cutress 1949; *Haliplanella luciae* (Verrill 1899): Hand 1956 (1955); *Diadumene lineata* (Verrill 1869): Williams 1980; *Haliplanella lineata* (Verrill 1869): Manuel 1981; *Haliplanela luciae* Doumenc, Chintiroglou, and Koukouras 1985; *Haliplanella lucia* (Verrill 1898): Song 1992; *Haliphlanella luciae* Hand and Uhlinger 1994; *Haliplannella luciae* Grosholz and Ruiz 1996.

Type locality: China, Hong Kong harbor, 0–1 m. Distribution: Austin (1985) cited circumpolar distribution south to southern California, littoral zone.

Family Hormathiidae

Actinauge verrillii McMurrich, 1893. Reticulate anemone.

Urticina nodosa Fabricius:Verrill 1873; *Actinauge nodosa* (Fabricius) Verrill: Verrill 1883; *Actinauge nodosa tuberculosa* Verrill 1883 [questionable synonymy Fautin, 2011]; *Actinauge* sp. Haddon 1889; *Actinauge Verrillii* McMurrich 1893; *Actinauge verrillii* McMurrich: Kwietniewski 1898; *Actinauge verrilli* McMurrich: Hargitt 1912; *Actinauge Verrilli* Gravier 1922; *non Actinauge verrillii* McMurrich: Verrill 1922; *Actinauge rugosa* Verrill 1922 [questionable synonymy Fautin, 2011]; *non Actinauge Verrillii* McMurrich: Carlgren 1928; *non Actinauge verrilli* (Haddon) McMurrich: Carlgren 1942.

Type locality: California, north of Channel Islands, San Clemente Island—U.S. Fish Commission *Albatross* 1888 station 2839, 757 m; Ecuador, Galapagos Islands, between Santa Cruz [Indefatigable][Chaves] and San Cristobal [Chatham] Islands—U.S. Fish Commission *Albatross* 1888 station 2818, 717 m; Chile, west of Lebu—U.S. Fish Commission *Albatross* 1888 station 2791, 1238 m. Distribution: Commonly caught on NMFS AFSC groundfish trawl surveys (NMFS, AFSC, RACE survey database, 2012); no records from Alaska had been cited in the literature until Eash-Loucks and Fautin (2012) cited several specimens from the Aleutians and Gulf of Alaska; depth unknown.

Allantactis parasitica Danielssen, 1890.

Allantactis parasitica Danielssen, 1890; *Calliactis Krøyeri* Danielssen, 1890; *Calliactis Kroeyeri* Danielssen: Carlgren, 1895; *Calliactis kroyeri* Dan., 1887: Stephenson, 1920

Type locality: Norwegian North Atlantic Expedition 1876–1878 station 33, 63.08°N, 3.00°E, 960 m. Distribution: Austin (1985) gave a circumpolar distribution to Alaska, shallow.

Hormathia digitata (Müller, 1776).

Actinia digitata Müller, 1776; *Actinia crassicornis* Fabricii, 1780; *Actinia spectabilis* Fabricii, 1780; *Actinia ditata* Gmelin, 1796; *Actinia dilatata* de Blainville, 1830; *Actinea crassicornis* Müller: Cocks, 1851; *Cereus digitatus* Milne Edwards, 1857; *Tealia digitata* (Müller): Gosse, 1858; *Hormathia Margaritae* Gosse, 1859; *Urticina digitata* (Müller) Verrill, 1873; *Urticina nodosa* Fabr. Sp.:Verrill, 1873; *Hormathia Margaritae* Gosse: Andres, 1883; *Chondractinia digitata* (O.F. Müller): Haddon, 1889; *Hormathia margaritae* (Gosse): Haddon, 1889; *Hormathia digitata* (O.F. Müll): Haddon, 1898; *Chondrachtinia* *digitata* O.F. Müll.: Nordgaard, 1905; *Chitonanthus incubans* Gravier, 1918 [questionable synonymy Fautin, 2011]; *Hormathia margaritae* Gosse: Carlgren, 1928; *Hormathia digitata vegae* Carlgren, 1942; *Hormathiogeton vegae* Carlgren, 1942; *Allantactis parasitica* Dan.: Carlgren, 1942; *Hormathia nodosa* (Fabricius): Carlgren, 1942; *Hormathia josefi* Zhiubikas, 1977.

Type locality: Denmark. Distribution: No published records from Alaska are available, but a voucher specimen for this species from the Gulf of Alaska is archived at the California Academy of Sciences (CAS 23865); depth unknown.

Hormathia nodosa (O. Fabricius, 1780). Rugose anemone.

Actinia nodosa Fabricius 1780; *Actinoloba nodosa* de Blainville 1830; *Metridium nodosum* Milne Edwards 1857; *Tealia digitata* Gosse 1860; *Chondractinia nodosa* Fabricius: Lütken 1861; *Urticina nodosa* Fabricius: Verrill 1873; non *Actinauge nodosa* (Fabricius) Verrill: Verrill 1883; *Actinauge nodosa tuberculosa* Verrill 1883; non *Actinauge nodosa coronata* Verrill 1883; *Chondrachtinia nodosa* Fabricius: Nordgaard 1905; *Hormathia nodosa* Fabricius 1780: Stephenson 1920; *Actinauge rugosa* Verrill 1922; *Actinauge borealis* Verrill 1922; *Chondractinia tuberculosa* (Verrill): Verrill 1922; non *Hormathia nodosa* (Fabricius 1780): Widersten 1976; *Hormatia nodosa* Thorbjørn and Høpner Petersen 2003.

Type locality: Greenland, 50 m. Distribution: No published records from Alaska are available, but a voucher specimen for this species from Stefansson Sound in the Beaufort Sea is archived at the California Academy of Sciences (CAS 27307).

?Paraphelliactis pabista Dunn, 1982.

Type locality: Canada, British Columbia, Queen Charlotte Islands, off the southern tip, 1829 m. Distribution: Dunn (1982) suggested the species probably occurs in Alaska; depth unknown.

Family Metridiidae

Metridium farcimen (Brandt, 1835). Gigantic anemone.

non Actinia Priapus Gmelin 1796*; Actinia farcimen* Brandt 1835*; Heliactis farcimen* Brandt 1835: Andres 1883*; Dendractis priapus* Tilesius 1809: Andres, 1883*; non Actinia priapus* McMurrich 1901*; Isometridium Richettsi* Carlgren 1949*; Isometridium rickettsi* Carlgren 1951*; Isometridium ricketsi* Hand 1956 (1955)*; Metridium giganteum* Fautin, Bucklin, and Hand 1989*; Metridium farcimen* (Brandt 1835): Fautin and Hand 2000.

Type locality: Avacha Bay, Kamchatka. Distribution: Commonly encountered on NMFS AFSC groundish surveys (NMFS, AFSC, RACE survey database, 2012); Eash-Loucks and Fautin (2012) extend the known distribution in Alaskan waters north to the Bering Sea and from Mexico to Russia in the North Pacific; from subtidal waters to 2740 m.

Metridium senile (Linnaeus, 1761). Cloned plumose anemone.

Priapus senilis Linnaeus 1761; *Actinia senilis* Linnaeus 1767; *Actinia Judaica* Linnaeus 1767 [questionable synonymy Fautin, 2011]; *Actinia dianthus* Ellis 1768 (1767); *Actinia plumosa* Müller 1776; *Actinia rufa* Müller 1776; *Actinia candida* Müller 1776; *Actinia pentapetala* Pennant 1777; *Actinia Dianthus* Ellis: Ellis and Solander 1786; *Actinia varians* Müller 1806; *Metridium Dianthus* Oken 1815; *Actinia marginata* Le Sueur 1817; *Metridium plumosa* de Blainville 1830; *Actinoloba dianthus* de Blainville 1830; *Actinea dianthus* Ellis: Cocks 1850; *Anthea plumosa* Cocks 1850; *Actinia pallida* Holdsworth 1855; *Actinia marginata ambrea* Leidy 1855; *Actinia marginata salmonea* Leidy 1855; *Sagartia Dianthus* Gosse 1855; *Metridium marginatum* Milne Edwards 1857; *Metridium dianthus* Milne Edwards 1857; *Sagartia pallida* (Holdsworth): Gosse 1858; *Sagartia pellucida* (Alder): Gosse 1858; *Actinia pellucida* Alder 1858; *Actinia Marginata* Dawson 1858; *Thoe pura* (Alder): Wright 1859; *Sagartia pura* Gosse 1860; *Metridium fimbriatum* Verrill 1865; *Actinoloba marginata* Le Sueur: Andres 1883; *Metridium dianthus sindonea* Gosse: Dixon and Dixon 1891; *Sagartia pallida rufa* (Holdsworth): Walton 1908; *Metridium senile* (Linnaeus): McMurrich 1911; *Actinothoe pallida* Holdsworth: Nafilyan 1912; *Metridium senilis* McMurrich 1921; *Metridium pallidum* (Holdsworth 1855); Stephenson 1925; *Metridium senile fimbriatum* (Verrill): Carlgren 1936; *Methridium senile dianthus* (Ellis): Dons 1945; *Metridium senile senile* (Linnaeus): Hand 1956 (1955).

Type locality: Baltic Sea. Distribution: Carlgren (1934) cited Alaskan records from St. Michaels, Norton Sound, low water, and Unalaska, Aleutian Islands. Carlgren (1936) cited Alaska, Sitka, and Whale Island, near Sitka; depth unknown.

No Rank Endomyaria

Family Actiniidae

Anthopleura artemisia (Pickering in Dana, 1846). Buried sea anemone.

Actinia artemisia Pickering in Dana 1846; *Bunodes Artemisia* Gosse 1855; *Cereus artemisia* Milne Edwards 1857; *Evactis artemisia* Verrill: Verrill 1869; *Cribrina artemisia* (Pickering): McMurrich 1901; *Anthopleura artemisia* (Dana): Carlgren 1952.

Type locality: Washington, Puget Sound, Discovery Bay, 0 m. Distribution: Torrey (1902) cited Alaska, Aleutian Islands, Unalaska, Dutch Harbor; Yakutat; Popof Island; and Sitka.

Anthopleura elegantissima (Brandt, 1835). Clonal anemone.

Actinia elegantissima Brandt 1835; *Cribrina elegantissima* (Brandt): McMurrich 1901; *Bunodactis elegantissima* (Brandt

1835): Carlgren 1949; *Anthopleura elegantissima* (Brandt): Carlgren 1952; *non Anthopleura elegantissima* solitary Potts and Smith 1987; *Anthopleura elegantissima* clonal Potts and Smith 1987.

Type locality: Alaska, Sitka, 0 m. Distribution: Gotshall (1994) cites distribution of Alaska to Baja California; 0–18 m.

Anthopleura xanthogrammica (Brandt, 1835). Giant green anemone.

Actinia Xanthogrammica Brandt 1835; *Actinia artemisia* Pickering in Dana 1846; *Evactis xanthogrammica* Verrill: Verrill 1869; *Bunodes Californica* Fewkes 1889; *Bunodes californica* Fewkes: Carlgren 1895; *Anthopleura xanthogrammica* (Brandt): McMurrich 1901; *Bunodactis xanthogrammica* (Brandt): Torrey 1906; *Anthopleura Xanthogrammica* (Brandt): Carlgren 1934; *Anthopleura xantogrammica* (Brandt): Carlgren 1945; *Anthopleura santhogrammica* (Brandt 1935): den Hartog 1987; *Anthopleura xanthogramaica* Brandt: Isomura and Nishihira 2006.

Type locality: Alaska, Sitka, 0 m. Distribution: Gotshall (1994) cites distribution of Alaska to central Baja California; 0–30 m.

Aulactinia incubans Dunn, Chia, and Levine, 1980. Incubating anemone.

Type locality: Washington, San Juan Islands, San Juan Island, west side of Cattle Point, American Camp, Grandmother's Cove, 0 m.

Distribution: Dunn et al. (1980) also cited specimens from Torch Bay, Southeast Alaska; 0 m.

Aulactinia stella (Verrill, 1864).

Actinia coriacea Johnston: Stimpson 1853 [questionable synonymy Fautin, 2011]; *Bunodes stella* Verrill 1864; *Bunodes spectabilis* (Fabricius): Verrill 1879; *Aulactinia stella* (Verrill): Duerden 1897; *Bunodactis stella* Verrill: Verrill 1899; *Corticifera glareola* (non Le Sueur 1817): Verrill 1907; *Cribina stella* (Verrill): McMurrich 1911; *Cribrina stella* Verrill: McMurrich 1912; *Tealiopsis stella* Verrill: Verrill 1922; *Anthopleura stella* (Verrill): Uchida 1938; *Anthopleura fusco-viridis* Carlgren 1949; *Anthopleura fuscoviridis* Carlgren 1949: Kostina 1988.

Type locality: Maine, Cape Elizabeth; Eastport; Canada, New Brunswick, Grand Manan, 0 m.

Distribution: Carlgren (1934) cited Unalaska, Aleutian Islands; depth unknown.

Cribrinopsis fernaldi Siebert and Spaulding, 1976. Chevron-tentacled anemone.

Type locality: Washington, San Juan Islands, San Juan Island, Friday Harbor Laboratories, about 10 m northeast of Cantilever Pier, 25–35 m. Distribution: Gotshall (1994) cited distribution as Gulf of Alaska to Washington; commonly encountered on NMFS Alaskan groundfish surveys, including the eastern Bering Sea (NMFS, AFSC, RACE survey database, 2012); depth unknown.

Cribrinopsis williamsi Carlgren, 1940. Williams anemone.

Type locality: Humpback Bay, Alaska, 56°11′N, 131°54′W, 27 m, near shore. Distribution: Known only from the type specimen; 27 m.

Epiactis arctica (Verrill, 1868). Arctic brooding anemone.

Phellia arctica Verrill 1868; *non Phellia arctica* Danielssen 1890; *Pseudophellia arctica* Verrill: Verrill 1899; *Epiactis arctica* (Verrill): Carlgren 1921.

Type locality: Arctic Ocean, north of Bering Strait, 55 m.

Distribution: Known in Alaska only from the type specimen.

Epiactis japonica (Verrill, 1869).

Epiactis prolifera Verrill 1869; *Bunodes japonica* Verrill 1869 (1870); *Bunodactis japonica* (Verrill): Verrill 1899; *Bunodes japonica* Uchida 1934; *Epiactis japonica* (Verrill 1869): Carlgren 1949; *Bunodactis japonica* (Verrill 1870): Carlgren 1949; *Cnidopus japonicus* Verrill: Hand 1955; *Cnidopus japonica* Verrill: Averincev 1967.

Type locality: Japan, Hokkaido ("*Jesso*"), Hakodate Bay, 1–2 m.

Distribution: Kostina (1985) cites Alaska, Popof Island.

Epiactis lewisi Carlgren, 1940.

Type locality: Bering Sea, 68°30′N, 169°20′W, 55 m.

Distribution: Known only from the type specimen.

Epiactis prolifera Verrill, 1869. Brooding anemone.

Epiactis prolifera Verrill 1869; *Bunodes Japonica* Verrill 1869 (1870) [questionable synonymy Fautin, 2011]; *Epiactis fertilis* Andres 1883; *Epiactis ritteri* Torrey 1902 [questionable synonymy Fautin, 2011]; *non Epiactis prolifera* Uchida 1934.

Type locality: Washington, Puget Sound. Distribution: Gotshall (1994) gave a distribution of Alaska to southern California; depth unknown.

Epiactis ritteri Torrey, 1902. Sandy anemone.

Epiactis prolifera Verrill 1869 [questionable synonymy Fautin, 2011]; *Epiactis ritteri* Torrey 1902; *Cnidopus Ritteri* (Torrey): Carlgren 1934; *Cnidopus ritteri* (Torrey): Carlgren 1945.

Type locality: Alaska, Popof Island, 0 m. Distribution: Carlgren (1945) cited Alaska 62°N, 159°W, depth unknown.

Urticina columbiana Verrill, 1922. Crusty red anemone.

Urticina columbiana Verrill 1922; *Tealia columbiana* (Verrill 1922): Carlgren 1949.

Type locality: Washington, Strait of Juan de Fuca, Port Townsend Bay, 55 m; and Puget Sound. Distribution: Occasionally seen on NMFS groundfish surveys in Southeast Alaska (NMFS, AFSC, RACE survey database, 2012); voucher specimen from the Gulf of Alaska is archived at the California Academy of Sciences (CAS 183914); depth unknown.

Urticina coriacea (Cuvier, 1798). Leathery anemone.

Actinia coriacea Cuvier 1798; *Actinea tuberculata* Cocks: Cocks 1850; *Tealia crassicornis* (Müller): Gosse 1858; *Tealia coriacea* Cuvier: Nafilyan 1912; *Urticina felina coriacea* Carlgren 1921; *Tealia felina coriacea* Stephenson 1935; *Urticina coriacea* Cuvier 1798: Zamponi and Acuña 1996 (1994); *Urticina felina* (Linnaeus 1767): Uchida and Soyama 2001.

Type locality: France. Distribution: Gotshall (1994) cited the distribution as from Alaska to southern California; depth unknown.

Urticina crassicornis (Müller, 1776). Mottled anemone.

Actinia crassicornis Müller 1776; *Urticina crassicornis* Müller: Carlgren 1893; *Urticina felina crassicornis* Carlgren 1921; *Tealia felina crassicornis* Linnaeus: Carlgren 1934; *Tealia crassicornis* (Müller 1776): Hand 1955; *Urticina felina kurila* (Averincev 1967): Uchida and Soyama 2001.

Type locality: Denmark. Distribution: Carlgren (1934) cited Alaska, Cape Lisburne, beach; mouth of Kotsebue Sound; 62°15′20″N, 167°48′W; 32 km off Devils Mountain; and Wrangell; depth unknown.

Urticina lofotensis (Danielssen, 1890). Spotted red anemone.

Bolocera eques Gosse 1860 [questionable synonymy Fautin, 2011]; *Rhodactinia Davisii* Agassiz: Verrill 1864 [questionable synonymy Fautin, 2011]; *Bulocera eques* Gosse 1860: Norman 1869 [questionable synonymy Fautin, 2011]; *Madoniactis lofotensis* Danielssen 1890; *Tealia lofotensis* (Danielssen 1890 pro parte): Carlgren 1902; *Rhodactinia crassicornis* (O.F. Müller): Walton 1908; *Urticina felina lofotensis* Carlgren 1921; *Tealia felina lofotensis* (Danielssen 1890): Stephenson 1928; *Tealia felina lofotensis* Danielssen: Collings 1938; *Urticina lofotensis* (Danielssen 1890): Wedi and Dunn 1983.

Type locality: Norway, Lofoten, Saltstrommen, 165 m. Distribution: Gotshall (1994) stated the distribution is circumpolar; northeast Pacific from Alaska to southern California; type material collected at 165 m.

Urticina piscivora (Sebens and Laakso, 1978). Velvety red anemone.

Tealia piscivora Sebens and Laakso 1978; *Urticina piscivora* (Sebens and Laakso 1977): Fautin, Kozloff, and Siebert 1987.

Type locality: Washington, Tatoosh Island, 15 m. Distribution: Gotshall (1994) cited distribution as from Alaska to La Jolla, California.

Family Condylanthidae

Charisea saxicola Torrey, 1902. Alaskan anemone.

Charisea saxicola Torrey 1902; *Condylanthus saxicola* Torrey 1902: Stephenson 1922.

Type locality: Alaska, Sitka ("Sitcha Island"), 0 m. Distribution: Carlgren (1934) cited Unalaska, Aleutian Islands, in pools during ebb tide.

Family Liponematidae

Liponema brevicorne (McMurrich, 1893). Tentacle-shedding anemone.

Bolocera brevicornis McMurrich 1893; *Liponema brevicornis* (McMurrich 1893): Carlgren 1949; *Lipomena brevicornis* Daly, Chaudhuri, Gusmão, and Rodriguez 2008.

Type locality: California, north of Channel Islands, San Clemente Island – U.S. Fish Commission *Albatross* 1888 station 2839, 757 m. Distribution: Dunn and Bakus (1977) cited Aleutian Islands, Unalaska Island, St. George Basin (185 km north of Dutch Harbor), 135 m; Bering Sea, Bowers Bank – U.S. Fish Commission Steamer *Albatross*, 1019 m; Eash-Loucks and Fautin (2012) cite many museum specimens collected from Gulf of Alaska and Aleutian waters, across the North Pacific to Japan; commonly encountered on NMFS groundfish surveys in the eastern Bering Sea (NMFS, AFSC, RACE survey database, 2012).

Family Minyadidae

Oceanactis diomedeae McMurrich, 1893.

Oractis Diomedeae McMurrich 1893; *Oractis diomedeae* McMurrich: Carlgren 1895; *Oceanactis diomedeae* (McMurrich 1893): Sanamyan 2003.

Type locality: California, north of Channel Islands, San Clemente Island – U.S. Fish Commission *Albatross* 1888 station 2839, 757 m. Distribution: Occasionally encountered in NMFS groundfish surveys (NMFS, AFSC, RACE survey database, 2012); a voucher specimen from Norton Sound is archived at the California Academy of Sciences (CAS 18512).

Family Ptychodactinidae

Ptychodactis aleutiensis Eash-Loucks, Jewett, Fautin, Hoberg, and Chenelot, 2010.

Type locality: Alaska, Aleutian Islands, Islands of Four Mountains, Kagamil Island, Kagamil Pass, 52.95°N, 169.71°W, 17 m. Distribution: Eash-Loucks et al. (2010) cited many localities throughout the Aleutian Islands.

Ptychodactis patula Appellöf, 1893.

Ptychodactis patula Appellöf 1893; *Ptychodactis apatula* Grebel'nyi 2007; *Phychodactis patula* Grebel'nyi 2007.

Type locality: Norway, Trondheimfjord, 183 m. Distribution: Carlgren (1934) cited Alaska, mouth of Kotzebue Sound; depth unknown.

No Rank Mesomyaria

Family Actinoscyphiidae

Actinoscyphia groendyki Eash-Loucks and Fautin, 2012.

Actinoscyphia plebeia (McMurrich 1893): Fautin 1984; *Actinoscyphia groendyki* Eash-Loucks and Fautin 2012.

Type locality: Oregon, 44.99°N, 126.66°W, 2770 m. Distribution: Eash-Loucks and Fautin (2012) cited specimens from the Aleutian Islands and the Gulf of Alaska at 52.08°N, 131.53°W; 52.77°N, 132.61°W; and 53.06°N, 132.98°W at depths ranging from 1039–1460 m.

Family Actinostolidae

Actinostola faeculenta (McMurrich, 1893).

Cymbactis faeculenta McMurrich 1893; *Cymbactis fæculenta* McMurrich 1893: Verrill 1899; *Paractinostola faeculenta* (McMurrich 1893): Carlgren 1949; *Actinostola faeculenta* (McMurrich 1893): Eash-Loucks and Fautin 2012.

Type locality: California, north of Channel Islands, San Clemente Island – U.S. Fish Commission *Albatross* 1888 station 2839, 757 m. Distribution: Commonly encountered on NMFS groundfish surveys (NMFS, AFSC, RACE survey database, 2012); Eash-Loucks and Fautin (2012) cited specimens from southern California to British Columbia and west to Japan, noting two voucher specimens from the Gulf of Alaska at the California Academy of Sciences.

Glandulactis spetsbergensis (Carlgren, 1893).

Kyathactis hyalina Danielssen 1890 [questionable synonymy Fautin, 2011]; *Actinostola spetsbergensis* Carlgren 1893; *Actinostola walteri* Kwietniewski 1898; *Actinostola sibirica* Carlgren 1901; *Actinostola spetzbergensis* Carlgren 1893: Stephenson 1920; *Glandulactis spetsbergensis* (Carlgren 1893): Riemann-Zürneck 1978.

Type locality: Svalbard, Spitsbergen, West Spitzbergen, Recherche Bay, no depth listed. Distribution: Carlgren (1934) cited the mouth of Kotzebue Sound, Alaska, and 32 km off Devil's Mountain, Alaska, 29–33 m; Carlgren (1921) cited the Bering Sea, *Vega* Expedition station 1061, near Alaskan waters at 64.57°N, 171.75°W, 46 m.

Stomphia coccinea (Müller, 1776). Swimming anemone.

Actinia coccinea Müller 1776; *Actinia carneola* Stimpson 1853; *Actinia nitida* Dawson 1858; *Stomphia churchiæ* Gosse 1859; *Rhodactinia davisii* Agassiz: Verrill 1864; *Cylista coccinea* Müller: Andres 1883; *Stomphia churchiae* Gosse 1859: Andres 1883; *Sagartia repens* Danielssen 1890; *Tealiopsis polaris* Danielssen 1890; *Kylindrosactis elegans* Danielssen 1890; *Stomphia churchiæ* Gosse 1859: Carlgren 1893; *Stomphia carneola* (Stimpson 1853) Verrill: Verrill 1899 pro parte; *Stomphia coccinea* (Müller 1776) Carlgren: Carlgren 1902; *Stomphia churchiae* Herdman 1918; *Stomophia coccinea* Fishelson 1970.

Type locality: Denmark. Distribution: Carlgren (1921) cited the Bering Sea, *Vega* Expedition near Alaskan waters at 64.50°N, 171.75° W; Carlgren (1934) cited coaling station near Cape Lisburne, Alaska, beach after 4 days of N.W. gale; Carlgren (1940) cited Alaska, Humpback Bay, 56°11′N, 131°54′W, 27 m near shore; Cleveland Passage, 57°33′N, 133°30′W, 22 m; Teller 65°16′N, 166°25′W, 9 m; and Bering Sea 68°30′N, 169°20′W, 55 m.

Order Ceriantharia

Suborder Spirularia

Family Cerianthidae

Pachycerianthus fimbriatus (Kwietniewski, 1898).

Cerianthus nobilis Haddon and Shackleton 1893 [questionable synonymy Fautin, 2011]; *Cerianthus elongatus* Kwietniewski 1898; *Pachycerianthus fimbriatus* Kwietniewski 1898: McMurrich 1910; *Pachycerianthus plicatus* Carlgren 1924; *Pachycerianthus torreyi* Arai 1965; *Pachycerianthus fimbriathus* (McMurrich 1910): Arai 1971.

Type locality: Torres Strait. Distribution: Gotshall (1994) cited distribution of Alaska to Isla San Martin, Baja California; Arai (1971) cited many localities in British Columbia; no specific Alaskan records were found in the literature; depth unknown.

Order Corallimorpharia

Family Corallimorphidae

Corallimorphus pilatus Fautin, White, and Pearson, 2002.

Type locality: Canada, British Columbia, 48°53.1′N, 126°54.5′W, 900 m. Distribution: Eash-Loucks and Fautin (2012) extended the range to include the Gulf of Alaska, citing two vouchers from the California Academy of Sciences.

Order Zoanthidea

No Rank Macrocnemina

Family Epizoanthidae

Epizoanthus scotinus Wood, 1957. Orange zoanthid.

Type locality None, but cites Washington, Puget Sound. Distribution: Gotshall (1994) cited distribution of southern Alaska to southern California (northern Channel Islands); Reimer and Sinniger (2010) cited many records from British Columbia; a voucher specimen from off Unalaska Island is archived at the California Academy of Sciences (CAS 168222); depth unknown.

Order Scleractinia (hard corals)

Suborder Caryophylliina

Superfamily Caryophyllioidea

Family Caryophylliidae

Caryophyllia (Caryophyllia) alaskensis Vaughan, 1941. Alaska cup coral.

Type locality: Behm Canal and Summer Strait, Alexander Archipelago, Alaska. Distribution: Aleutian Islands and Gulf of Alaska to British Columbia; Commander Islands; Kamchatka; 102–399 m.

Caryophyllia (Caryophyllia) arnoldi Vaughan, 1900. Brown cup coral.

Caryophyllia alaskensis: Durham 1947 (in part, specimens from California); *Caryophyllia ambrosia*: Keller 1981 (in part: Vityaz-6127).

Type locality: San Pedro, California. Distribution: Aleutian Islands and southern Alaska to California; 40–656 m.

Crispatotrochus foxi (Durham and Barnard, 1952). Cup coral.

Cyathoceras foxi Durham and Barnard 1952.

Type locality: Richardson Point, San Miguel Island, Channel Islands, California. Distribution: Aleutian Islands to California; 82–274 m.

Desmophyllum dianthus (Esper, 1794). Giant funnel coral.

Madrepora dianthus Esper 1794; *Desmophyllum cristagalli* Milne Edwards and Haime 1848; *Desmophyllum cumingii* Milne Edwards and Haime 1848.

Type locality: Sagami Bay (neotype). Distribution: Eastern North Pacific (southeast Alaska to Baja California, Mexico); Panama; Cocos and Galapagos Islands; Japan; cosmopolitan except for off continental Antarctica and boreal Pacific; 35–2460 m.

Superfamily Flabelloidae

Family Flabellidae

Flabellum (Flabellum)* sp. A *sensu Cairns, 1994.

Distribution: Aleutian Islands: Unalaska Bay, Fox Islands and off Amchitka, Rat Islands; 55–507 m.

Javania borealis Cairns, 1994. Aleutian trumpet coral.

Type locality: North of Attu Island, Near Islands, Aleutian Islands. Distribution: Western Aleutian Islands; Sea of Japan off northwestern tip of Hokkaido; 247–348 m.

Javania cailleti (Duchassaing and Michelotti, 1864). Slender trumpet coral.

Desmophyllum cailleti Duchassaing and Michelotti 1864; *Desmophyllum eburneum* Moseley 1881; *Desmophyllum nobile* Verrill 1885; *Desmophyllum vitreum* Alcock 1898; *Desmophylum galapagense* Vaughan 1906; *Desmophyllum delicatum* Yabe and Eguchi 1942; *Javania delicate*: Zibrowius 1974.

Type locality: Galapagos Islands. Distribution: Cosmopolitan; 86–2165 m.

Suborder Dendrophylliina

Family Dendrophylliidae

Balanophyllia elegans Verrill, 1864.

Type locality: Crescent City and Mendocino, California. Distribution: Snipe Bay, Southeast Alaska to Baja California, Mexico; 0–293 m; common.

Class Staurozoa

The Stauromedusae was formerly an order within the class Scyphozoa but is now considered the separate class Staurozoa.

Order Stauromedusae

Suborder Eleutherocarpida

Family Lucernariidae

Haliclystus stejnegeri Kishinouye, 1899.

Type locality: Bering Island, North Pacific Ocean. Distribution: Bering Sea to Washington; western North Pacific; littoral zone.

Class Scyphozoa (true jellyfishes)

The scyphozoans comprise the true jellyfishes. Scyphozoans exhibit an alternation of generations (asexual benthic polyps alternate with sexual planktonic medusae), with the medusoid stage predominating. About 200 species are known worldwide, but the taxon likely includes at least 400 species (Daly et al., 2007). Approximately 10 species are represented in Alaskan waters (Table 1).

Order Coronatae

Family Atollidae

Atolla wyvillei Haeckel, 1880.

Colaspis achillis Haeckel 1880; *Atolla gigantea* Maas 1897; *Atolla chuni* Vanhöffen 1902.

Type locality: Antarctic. Distribution: Cosmopolitan, including Bering Sea to California; deep water.

Family Periphyllidae

Periphylla periphylla (Péron and Lesueur, 1810).

Carybdea periphylla Péron and Lesueur 1810; *Periphylla hyacinthata* Steenstrup 1837; *Periphylla dodecabostrycha* Haeckel 1880; *Periphylla regina* Haeckel 1880.

Type locality: Not traced. Distribution: Semi-cosmopolitan, including Alaska to southern California; deep water; common.

Subclass Discomedusae

Order Semaeostomeae

Family Cyaneidae

Cyanea capillata (Linnaeus, 1758). Lion's mane.

Medusa capillata Linnaeus 1758; *Cyanea versicolor* L. Agassiz 1862.

Type locality: Northern oceans ("*Habitat in Oceano septentrionali*"). Distribution: Cosmopolitan, including northern Alaska to Baja California, Mexico; depth unknown; common.

Family Pelagiidae

Chrysaora fuscescens Brandt, 1835. Sea nettle.

Chrysaora (Polybostrycha) helvola Brandt 1838; *Chrysaora gilberti* Kishinouye 1898.

Type locality: Southern Bering Sea, from the original description; Monterey Bay, California, from the neotype (Morandini and Marques, 2010). Distribution: Aleutian Islands to California; shallow; common.

Chrysaora melanaster Brandt, 1838. Sunrise or brown jelly or northern sea nettle.

Dactylometra longicirra Kishinouye 1892; *Chrysaora depressa* (Kishinouye 1902); *Chrysaora melanaster* var. *gilberti* Mayer 1910 (non *Chrysaora gilberti* Kishinouye 1902); *Dactylometra pacifica*: Calder 1972 [non *Dactylometra pacifica* (Goette, 1886)].

Type locality: Kamchatka, Russia. Distribution: Bering Sea; Aleutian Islands to Oregon; western North Pacific; epipelagic to approximately 100 m; common.

Family Ulmaridae

Aurelia aurita (Linnaeus, 1758). Moon jelly.

Medusa aurita Linnaeus 1758; *Aurelia flavidula* (Péron and Lesueur 1810); *Aurelia coerulea* von Lendenfeld 1884.

Type locality: Baltic Sea and North Atlantic Ocean, ("*Habitat in Mari Balthico, Oceano*"). Distribution: Cosmopolitan; depth unknown; common.

Aurelia labiata Chamisso and Eysenhardt, 1821. Moon jelly.

Aurelia aurita labiata Chamisso and Eysenhardt 1821.

Type locality: Kotzebue, Alaska. Distribution: Eastern Bering Sea to southern California; western Pacific; depth unknown; common.

Aurelia limbata (Brandt, 1835). Brownbanded moon jelly.

Diplocraspedon limbata Brandt 1838.

Type locality: Not traced. Distribution: Alaska to British Columbia; western North Pacific; North Atlantic; depth unknown; common.

Phacellophora camtschatica Brandt, 1835. Fried egg jellyfish.

Callinema ornata Verrill 1869; *Phacellophora sicula* Haeckel 1880.

Type locality: Kamchatka. Distribution: Northern Alaska to Chile; Japan; Siberia; depth unknown; common.

Phylum Ctenophora—The Comb Jellies and Sea Gooseberries

The ctenophores (comb jellies and sea gooseberries) resemble cnidarian jellyfish but instead of having nematocysts their tentacles are covered with colloblasts, which are sticky cells that capture prey. They are found in most marine environments from polar waters to the tropics, near coasts and in mid-ocean, from the surface waters to the ocean depths. There are about 100 to 150 species known worldwide, and at least another 25 from the abyss have been recognized but not yet analyzed in enough detail to support a formal description and naming (Mills, 2012). It is thought that only about half of the ctenophores have been described (Mills, 2012). Approximately six species occur in Alaskan waters (Table 1).

Class Tentaculata

Order Cydippida

Family Dryodoridae

Dryodora glandiformis (Mertens, 1833).

Beroe glandiformis Mertens 1833; *Eschscholtzia glandiformis* (Mertens 1833); *Mertensia glandiformis* (Mertens 1833).

Type locality: Bering Strait. Distribution: Bering Sea to Washington; shallow water.

Family Mertensiidae

Mertensia ovum (O. Fabricius, 1780).

Mertensia cucullus Agassiz 1860.

Type locality: Greenland. Distribution: Alaska to central California; North Atlantic; shallow water.

Family Pleurobrachiidae

Hormiphora cucumis (Mertens, 1833).

Beroe cucumis Mertens 1833; *Euplokamis cucumis* (Mertens 1833); *Janira cucumis* (Mertens 1833).

Type locality: Southern Alaska. Distribution: Gulf of Alaska to Washington; shallow water.

Pleurobrachia bachei L. Agassiz, 1860. Sea gooseberry or sea walnut.

Pleurobrachia pileus (O. Fabricius 1780 *fide* authors in NE Pacific).

Type locality: Puget Sound, Washington. Distribution:

Gulf of Alaska to Baja California, Prince William Sound, Alaska; Mexico; shallow water.

Order Lobata

Family Bolinopsidae

Bolinopsis infundibulum (O. F. Müller, 1776). Lobed sea gooseberry.

Bolinopsis septentrionalis Mertens 1833; *Bolinopsis alata* (L. Agassiz 1860); *Bolinopsis microptera* (A. Agassiz 1865).

Type locality: Norway. Distribution: Circumpolar and boreal, including Bering Sea to southern California; Prince William Sound, Alaska; shallow water.

Class Nuda

Order Beroida

Family Beroidae

Beroe cucumis O. Fabricius, 1780.

Beroe roseola L. Agassiz 1860.

Type locality: Greenland. Distribution: Cosmopolitan, including Alaska to California; shallow water.

Phylum Platyhelminthes—The Free-living Flatworms

About 4500 species of free-living flatworms (turbellarians) are known worldwide (Ruppert et al., 2004). Approximately seven species of turbellarians occur in Alaskan waters (Table 1). Flatworms are the simplest animals that are bilaterally symmetrical and triploblastic. Having no body cavity other than the gut, they lack an anus and specialized circulatory and respiratory organs. Only the free-living flatworms (turbellarians) are treated here; the parasitic flatworms are omitted.

Class Turbellaria

Order Polycladida

Suborder Acotylea

Superfamily Stylochoidea

Family Callioplanidae

Kaburakia excelsa Bock, 1925. Giant flatworm.

Cryptophallus magnus Freeman 1933.

Type locality: Not traced. Distribution: Southern Alaska to central California; intertidal and subtidal zones; common.

Superfamily Leptoplanoidea

Family Notoplanidae

Notocomplana sanjuania (Freeman, 1933).

Notoplana sanjuania Freeman 1933.

Type locality: Puget Sound, San Juan Islands. Distribution: Alaska to Washington; littoral zone; common.

Notoplana longastyletta (Freeman, 1933).

Stylochoplana longastyletta Freeman 1933.

Type locality: Puget Sound, Washington (neotype). Distribution: Aleutian Islands and southern Alaska to Washington; littoral zone.

Family Pleioplanidae

Pleioplana atomata (O. F. Müller, 1776).

Planaria atomata O. F. Müller 1776; *Leptoplana atomata* (O. F. Müller 1776); *Notoplana atomata* (O. F. Müller 1776); *Leptoplana droebachensis* Oersted 1845; *Polycelis fallax* Quatrefage 1845; *Leptoplana fallax* (Quatrefage 1845); *Notoplana fallax* (Quatrefage 1845); *Polycelis variabilis* Girard 1850; *Leptoplana variabilis* (Girard 1850); *Planaria maculata* Dalyell 1853; *Leptoplana ellipsoides* Verrill 1893; *Leptoplana virilis* Verrill 1893; *Notoplana virilis* (Verrill 1893); *Leptoplana angusta* Pearse 1938.

Type locality: Greenland. Distribution: Circumpolar; Arctic Alaska to Washington; North Atlantic; Mediterranean Sea; to a depth of 226 m; common.

Suborder Cotylea

Superfamily Euryleptoidea

Family Euryleptidae

Acerotisa arctica Hyman, 1953.

Type locality: Point Barrow, Alaska. Distribution: Known only from type locality; 90–138 m.

Order Tricladida

Suborder Maricola

Family Nexilidae

Nexilis epichitonius Holleman and Hand, 1962.

Type locality: California. Distribution: Aleutian Islands to central California; littoral zone.

Remarks: Commensal with the chiton *Mopalia hindsi* and the mussel *Mytilus californianus.*

Family Nesionidae

Nesion arcticum Hyman, 1956.

Type locality: Point Barrow, Alaska. Distribution: Arctic Alaska; depth unknown.

Phylum Nemertea—The Ribbon Worms

About 1149 species of nemerteans ("ribbon worms") are known worldwide (Gibson, 1995), with approximately 59 species occurring in Alaskan waters (Table 1). Many species remain inadequately described and many families are in need of taxonomic revision (Gibson, 1995).

Several species are found in close association with crustaceans. Proper identification is based on histological studies of anatomy. A key to identify Arctic species can be found in Buzhinskaja (2011). Several sources of secondary literature were used to compile the information for the list of nemerteans: Griffin (1898), Coe (1901, 1904, 1905, 1926, 1930, 1940, 1944), and Gibson (1995).

Class Anopla

Order Palaeonemertea

Family Cephalothricidae

Cephalothrix spiralis Coe, 1930. Tread ribbon worm.

Paracephalothrix spiralis (Coe 1930); *Cephalothrix linearis* Rathke.

Type locality: Not specified (North Atlantic coast of America). Distribution: Alaska to southern California; North Atlantic coast of America; intertidal zone to 20 m.

Remarks: Gibson (1995) considered this species to be a junior synonym of *Cephalothrix rufifrons* (Johnston 1837).

Family Tubulanidae

Tubulanus albocinctus (Coe, 1904). White-ringed ribbon worm.

Carinella albocincta Coe 1904.

Type locality: Southern California. Distribution: Widespread in the eastern Pacific; Chukchi Sea; to a depth of approximately 200 m.

Tubulanus capistratus (Coe, 1901).

Carinella capistrata Coe 1901.

Type locality: Prince William Sound. Distribution: Prince William Sound to California; Japan; littoral zone.

Tubulanus cingulatus (Coe, 1904).

Carinella cingulatus Coe 1904.

Type locality: Monterey Bay, California. Distribution: Alaska to southern California; to a depth of 27 m.

Tubulanus frenatus (Coe, 1904).

Carinella frenata Coe 1904.

Type locality: San Pedro, California. Distribution: Northern Alaska to southern California; littoral zone; uncommon.

Tubulanus nothus (Bürger, 1892).

Carinella nothus Bürger 1892.

Type locality: Gulf of Neapel. Distribution: Alaska; North Atlantic; littoral zone.

Tubulanus polymorphus Renier, 1804. Orange ribbon worm.

Carinella polymorpha (Renier 1804); *Nemertes polymorpha* (Renier 1804); *Ophyocephalus polymorphus* (Renier 1804); *Carinella rubra* Griffin 1898; *Carinella speciosa* Coe 1901; *Valencia splendida.*

Type locality: Mediterranean Sea. Distribution: Alaska to southern California; northern Europe; Mediterranean Sea; intertidal zone to 50 m.

Tubulanus sexlineatus (Griffin, 1898). Six-lined ribbon worm.

Carinella sexlineata Griffin 1898; *Carinella dinema* Coe 1901.

Type locality: Port Townsend, Puget Sound, Washington, or Sitka, Alaska (not stated specifically). Distribution: Southern Alaska to southern California; intertidal zone to 15 m.

Tubularia annulatus (Montagu, 1804).

Gordius annulatus Montagu 1804; *Carinella annulata* (Montagu 1804).

Type locality: Devonshire, England. Distribution: Chukchi Sea; Atlantic subtropical-boreal; ?Barents Sea; upper subtidal zone.

Order Heteronemertea

Family Lineidae

Cerebratulus albifrons Coe, 1901.

Type locality: Sitka, Alaska. Distribution: Gulf of Alaska to southern California; intertidal zone to 97 m.

Cerebratulus californiensis Coe, 1905.

Type locality: California. Distribution: Aleutian Islands to Baja California, Mexico; intertidal zone to 50 m.

Cerebratulus fuscus (McIntosh, 1874).

Micrura fusca McIntosh 1874; *Cerebratulus maculosus.*

Type locality: England. Distribution: Northern Alaska; Chukchi and White seas; North Atlantic; South Africa; littoral zone.

Cerebratulus herculeus Coe, 1901.

Cerebratulus latus Coe 1905.

Type locality: Sitka, Alaska. Distribution: Eastern Bering Sea to southern California; littoral zone.

Cerebratulus longiceps Coe, 1901.

Type locality: Yakutat, Alaska. Distribution: Alaska to northern California; littoral zone; uncommon.

Cerebratulus marginatus Renier, 1804.

Cerebratulus angulatus McIntosh 1872–73; *Cerebratulus angulosus* Haddon 1886; *Cerebratulus fuscus* Verrill 1892; *Avenardia alileuti; Avenardia priei; Gordius fragilis; Cerebratulus randis; Cerebratulus spraguei.*

Type locality: Mediterranean Sea. Distribution: Eastern Bering Sea to southern California; Japan; Great Britain; Madeira; Greenland; Mediterranean Sea; northeastern coast of North America; intertidal zone to 252 m.

Cerebratulus montgomeryi Coe, 1901. Rose ribbon worm.

Type locality: Not specified. Distribution: Northern Alaska to California; Japan; Siberia; intertidal zone to 400 m; common.

Cerebratulus occidentalis Coe, 1901.

Type locality: Not specified (found in abundance at Wrangell, Yakutat, Orca, and Virgin Bay). Distribution: Eastern Bering Sea to California; Japan; to a depth of approximately 20 m; common.

Cerebratulus signatus Coe, 1905.

Type locality: Bering Sea (53°47′N, 167°14′W). Distribution: Known only from type locality; 110 m.

Euborlasia variegata Coe, 1944.

Type locality: Cook Inlet, Alaska. Distribution: Known only from type locality; 30 m.

Lineus bilineatus (Renier, 1804).

Cerebratulus bilineatus Renier 1804; *Lineus bilineata* (Renier 1804); *Gordius taenia* Dalyell 1853; *Cerebratulus oerstedtii* Koehler 1885; *Lineus albolineatus* Coe 1904.

Type locality: Mediterranean Sea. Distribution: Alaska to southern California; Japan; North Atlantic; South Africa; lower intertidal to sublittoral zones.

Lineus ruber (Müller, 1774). Red ribbon worm.

Fasciola rubra Müller 1774; *Poseidon ruber* (Müller 1774); *Fasciola viridis* Müller 1774; *Lineus viridis* (Müller 1774); *Planaria sanguinea* Rathke 1799; *Gordius oculatus* Montagu 1802; *Lineus oculatus* (Montagu 1802); *Planaria rufa* Montagu 1808; *Lineus rufus* (Montagu 1808); *Planaria unicolor* Johnston 1828–29; *Gordius gesserensis* Dalyell 1853; *Lineus gesserensis* (Dalyell 1853); *Lineus obscurus* Riches 1893.

Type locality: Greenland. Distribution: Circumpolar in the Northern Hemisphere, including Alaska to California; littoral zone; common.

Lineus torquatus Coe, 1901.

Type locality: Prince William Sound, Alaska. Distribution: Aleutian Islands to southern California; littoral zone.

Micrura alaskensis Coe, 1901.

Micrura griffini Coe 1905.

Type locality: Prince William Sound, Alaska. Distribution: Northern Alaska to Baja California, Chukchi Sea; Mexico; littoral zone.

?*Micrura bella* (Stimpson, 1857).

Cerebratulus bella Stimpson 1857; *Lineus bellus* (Stimpson 1857); *Meckelia bella* (Stimpson 1857); *Micrura festiva* Takakura 1898.

Type locality: Japan. Distribution: Hokkaido and Honshu, Japan; possibly the Bering Strait and Alaska; intertidal and sublittoral zones.

Micrura impressa (Stimpson, 1857).

Cerebratulus impressus Stimpson 1857; *Meckelia impressa* (Stimpson 1857).

Type locality: Bering Strait. Distribution: Known only from type locality; 35 m.

Micrura nebulosa Coe, 1905.

Type locality: South of the Alaska Peninsula. Distribution: Southern Alaska; deep water, type material collected at 883 m.

Micrura verrilli Coe, 1901. Purple or lavender and white ribbon worm.

Lineus striatus: Ricketts and Calvin 1956.

Type locality: Prince William Sound. Distribution: Prince William Sound to central California; intertidal and subtidal zones.

Family Valenciniidae

Baseodiscus princeps (Coe, 1901).

Taeniosoma princeps Coe 1901.

Type locality: Not specified (Cape Fox, Yakutat, and Prince William Sound). Distribution: Northeastern Gulf of Alaska to Washington; littoral zone.

Class Enopla

Order Hoplonemertea

Suborder Monostilifera

Family Carcinonemertidae

Carcinonemertes errans Wickham, 1978.

Type locality: Bodega Bay, California. Distribution: Southeast Alaska (Auke Bay) to central California; littoral zone.

Remarks: Found only on the crab *Cancer magister.*

Carcinonemertes regicides Shields, Wickham, and Kuris, 1989.

Type locality: Alaska. Distribution: Known only from type locality; depth unknown.

Remarks: Found on the red king crab, *Paralithodes camtschatica.*

Ovicides paralithodis Kajihara and Kuris, 2013.

Carcinonemertidae forma 4: Wickham and Kuris 1988.

Type locality: Sea of Okhotsk, off Abashiri, Hokkaido, Japan. Distribution: Alaska: Adak Island; Dutch Harbor; Morshovoi Bay; Pavlof Bay; Kodiak Island; Resurrection Bay; Seward; Cook Inlet; southeastern Alaska (Barlow Cove, Deadman's Reach, Gambier Cove, and Pybus Cove, Juneau); depth unknown.

Remarks: Found on the red king crab, *Paralithodes camtschatica.*

Family Emplectonematidae

Emplectonema burgeri Coe, 1901. Mottled ribbon worm.

Neesia burger (Coe 1901); *Emplectonema violaceum*: Griffin 1898 (non Bürger).

Type locality: Glacier Bay and Sitka, Alaska. Distribution: Northern Alaska to California; Japan; intertidal and subtidal zones.

Emplectonema gracile (Johnston, 1837). Green ribbon worm.

Nemertes gracilis Johnston 1837; *Eunemertes gracilis* (Johnston 1837); *Prostoma gracilis* (Johnston 1837); *Omatoplea gracilis* (Johnston 1837); *Emplectonema viride* Stimpson 1857; *Nemertes balmea*; *Nemertes glauca*.

Type locality: Europe. Distribution: Northern Alaska to Mexico; Aleutian Islands; Japan; Kamchatka Peninsula; Europe; Mediterranean Sea; intertidal zone to 100 m; common.

Emplectonema purpuratum Coe, 1905. Leopard ribbon worm.

Type locality: Adak Island, Aleutian Islands. Distribution: Aleutian Islands and southern Alaska to Washington; subtidal zone.

Nemertopsis gracilis Coe, 1904.

Type locality: Pacific Grove, California. Distribution: Northern Alaska to Mexico; Chile; littoral zone.

Paranemertes carnea Coe, 1901.

Type locality: Northeastern Gulf of Alaska (collected at Taku Harbor, Sitka, Yakutat, Prince William Sound, and Popof Island). Distribution: Northeastern Gulf of Alaska to Washington; littoral zone.

Paranemertes pallida Coe, 1901.

Type locality: Yakutat or Sand Point on Popof Island, Alaska. Distribution: Aleutian Islands and southern Alaska; littoral zone.

Paranemertes peregrina Coe, 1901. Mud nemertean or purple-backed ribbon worm.

Paranemertes peregrina var. *alaskensis*; *Paranemertes peregrina* var. *californiensis*.

Type locality: Not specified (collecting stations were from Unalaska Island to Victoria, BC). Distribution: Northern Alaska to Baja California, Mexico; Japan; Siberia; intertidal and subtidal zones.

Family Amphiporidae

Alaxinus oclairi Gibson, Wickham, and Kuris, 1990.

Type locality: Juneau, Alaska. Distribution: Known only from type locality; depth unknown.

Remarks: Found on an egg mass of the red king crab, *Paralithodes camtschatica*.

Amphiporus angulatus (Müller, 1774).

Fasciola angulata Müller 1774; *Cerebratulus angulatus* (Müller 1774); *Meckelia angulata* (Müller 1774); *Planaria angulata* (Müller 1774).

Type locality: Greenland. Distribution: Bering Strait to California; Aleutian Islands; Japan; Kamchatka; North Atlantic (Baffin Bay, Davis Strait, Labrador, Nova Scotia, east coast of the U.S. from New England to Cape Cod, and further offshore beneath the Arctic current); intertidal zone to 150 m.

Amphiporus beringianus (Stimpson, 1857).

Cosmocephala beringiana Stimpson 1857; *Amphiporus angulatus beringianus*: Bürger 1904.

Type locality: Bering Strait. Distribution: Known only from type locality; shallow sublittoral zone.

Remarks: This species was listed as a *nomen dubium* by Gibson and Crandall (1989).

Amphiporus bimaculatus Coe, 1901. Chevron ribbon worm.

Nipponnemertes bimaculatus (Coe 1901).

Type locality: Not specified (collected at Victoria, B.C., on the piles of the wharf; at Sitka among hydroids, etc., near low water, and a finely preserved specimen from Puget Sound). Distribution: Northern Alaska to Baja California, Mexico; Japan; eastern Russia; intertidal zone to 137 m.

Amphiporus cervicalis (Stimpson, 1857).

Polina cervicalis Stimpson 1857.

Type locality: Japan. Distribution: North Pacific (Alaska, Aleutian Islands, Japan); intertidal zone.

Remarks: This species was listed as a *nomen dubium* by Gibson and Crandall (1989).

Amphiporus formidabilis Griffin, 1898. White ribbon worm.

?*Amphiporus exilis* Coe 1901.

Type locality: Puget Sound and Alaska. Distribution: Alaska to central California; Bering Island; Japan; intertidal zone.

Amphiporus gelatinosus Coe, 1905.

Type locality: Southwest of Kodiak Island, Alaska. Distribution: Alaska to Puget Sound, Washington; Japan; 40–450 m.

Amphiporus imparispinosus Griffin, 1898. Pink-fronted ribbon worm.

?*Amphiporus imparispinosus* var. *similis*; ?*Amphiporus leuciodus* Coe 1901.

Type locality: Port Townsend and Sitka. Distribution: Northern Alaska to Baja California, Mexico; Siberia; intertidal zone to 50 m.

Amphiporus macracanthus Coe, 1905.

Type locality: Near Cape Smyth, Alaska. Distribution: Northern Alaska; 4–18 m.

Amphiporus maculosus Coe, 1944.

Type locality: Lagoon Reef, St. Paul Island, Bering Sea. Distribution: Eastern Bering Sea; depth unknown.

Amphiporus nebulosus Coe, 1901.

Type locality: Kukak Bay, Alaska. Distribution: Alaska; Japan; intertidal and shallow subtidal zones.

Amphiporus paulinus Punnett, 1901.

Type locality: Pribilof Islands, Bering Sea. Distribution: Known only from type locality; depth unknown.

Amphiporus tigrinus Coe, 1901.

Type locality: Farragut Bay, Alaska. Distribution: Alaska to Puget Sound, Washington; intertidal zone.

Zygonemertes thalassina Coe, 1901.

Type locality: Sitka, Alaska. Distribution: Southern Alaska; intertidal to sublittoral zones.

Family Cratenemertidae

Nipponnemertes pacificus (Coe, 1905).

Amphiporus pacificus Coe 1905; *Cratenemertes pacificus* (Coe 1905).

Type locality: Not specified. Distribution: Eastern Bering Sea to central California; Chile; 70–190 m.

Family Tetrastemmatidae

Amphinemertes caeca (Coe, 1901).

Tetrastemma caecum Coe 1901.

Type locality: Kodiak Island, Alaska. Distribution: Gulf of Alaska; intertidal and shallow subtidal zones.

Quasitetrastemma bicolor (Coe, 1901).

Tetrastemma bicolor Coe 1901.

Type locality: Kodiak Island, Alaska. Distribution: Gulf of Alaska; to a depth of about 6 m.

Tetrastemma aberrans Coe, 1901.

Nareda aberrans (Coe 1901).

Type locality: Either Glacier Bay or Orca, Prince William Sound, Alaska. Distribution: Known only from type locality; intertidal zone to a depth of about 8 m; uncommon.

Tetrastemma candidum (Müller, 1774).

Fasciola candida Müller 1774; *Hecate candida* (Müller 1774); *Planaria candida* (Müller 1774); *Prostoma candidum* (Müller 1774); *Planaria quadrioculata* Johnston 1828; *Nemertes quadrioculata* (Johnston 1828); *Prostoma quadrioculata* (Johnston 1828); *Prostoma biancestro* Delle Chiaje 1841; *Nemertes ehrenbergii* Kölliker 1845; *Tetrastemma ehrenbergii* (Kölliker 1845); *Tetrastemma groenlandicum* Diesing 1850; *Tetrastemma serpentina* Girard 1851; *Hecate serpentina* (Girard 1851); *Planaria algae* Dalyell 1853; *Tetrastemma algae* (Dalyell 1853); *Polia capitata* Beneden 1861; *Tetrastemma versicolor* Beneden 1883.

Type locality: Greenland. Distribution: Circumpolar in the Northern Hemisphere; northern Alaska to Mexico; Japan; British Isles; coasts of Scandinavia; North Sea; Mediterranean Sea; Madeira; Faroe Islands; Iceland; Caribbean; Atlantic coast of North America; ?South Africa; intertidal zone to a depth of 55 m or more.

Order Polystilifera

Suborder Pelagica

Family Pelagonemertidae

Pelagonemertes brinkmanni Coe, 1926.

Type locality: Not specified. Distribution: North Pacific and Bering Sea in the Aleutian Islands; Queen Charlotte Islands; Kamchatka Peninsula; Kuril Islands; to a depth of about 600 m.

Family Protopelagonemertidae

Protopelagonemertes hubrechti (Brinkmann, 1917).

Bathynemertes hubrechti Brinkmann 1917; *Bathynectes hubrechti* (Brinkmann 1917); *Planktonemertes hubrechti* (Brinkmann 1917).

Type locality: West European Basin. Distribution: Southern Alaska; western North Pacific; North Atlantic; South Atlantic; to a depth of about 2500 m.

Phylum Entoprocta—The Entoprocts or Kamptozoans

Members of the Entroprocta superficially resemble hydroids and bryozoans and worldwide the phylum comprises about 150 species of small, sessile, solitary, or colonial creatures. Formerly included with the bryozoans, they are distinguished by being acoelomate and having an anus inside a ring of tentacles. While common intertidally, some are known from depths as great as 500 m. Apparently only one species is found in Alaskan waters (Table 1). Additional species are to be expected.

Family Pedicellinidae

Pedicellina cernua (Pallas, 1771).

Brachionus cernuus Pallas 1771; *Pedicellina echinata* M. Sars 1835; *Pedicellina americana* Leidy 1855; *Pedicellina glabra* Ehlers 1890.

Type locality: Not traced. Distribution: Cosmopolitan, including Alaska to California; littoral zone, usually found on the piles of docks or at low tide.

Phylum Priapulida—The Penis Worms

Only 17 species of priapulans are known worldwide (Wilson et al., 2003), and only one species is represented in Alaskan waters. Priapulans are unsegmented marine worms with bilaterally symmetrical bodies and have an introvert with 20 or 25 longitudinal rows of chitinous papilla-like scalids. Recent research (Martín-Durán et al., 2012) has shown that they exhibit deuterostomic development even though DNA sequence data places them within the protostomes.

Family Priapulidae

Priapulus caudatus Lamarck, 1816. Cactus worm.

Priapus humanus Linnaeus 1758; *Priapulus brevicaudatus* Ehlers 1861; *Priapulus glandifer* Ehlers 1861; *Priapulus profundus* Sanders and Hessler 1962.

Type locality: Not traced. Distribution: Circumpolar; littoral zone.

Phylum Annelida

Class Polychaeta—The Bristle Worms

About 9000 species of polychaetes are known worldwide, with many more still to be discovered and described (Rouse and Pleijel, 2001). Approximately 419 species of polychaetes are represented in Alaskan waters (Table 1). The scale worm family Polynoidae is diverse in Alaskan waters, with approximately 43 species that are among the most commonly encountered polychaetes represented in bottom-trawl surveys because of their commensal associations with other invertebrates, especially echinoderms, corals, and sponges. There are approximately 600 species of polynoids worldwide, according to "An Interactive Identification Guide to the Polychaetes" (Wilson et al., 2003). The higher classification follows Rouse and Pleijel (2001). Linnaean ranks are abandoned above family level because of the unsettled state of polychaete systematics. Good sources for identifying species to family level are Glasby and Fauchald (2002) and Rouse and Pleijel (2001). Members of the phylum Pogonophora are now considered to be polychaetes in the family Siboglinidae (Rouse, 2001) and are found in association with hydrothermal vents and methane seeps. Several sources of primary and secondary literature were used to compile the information for the list of polychaetes: Hartman (1959a,b, 1968, 1969); Reish (1965); Ushakov (1965); Bilyard and Carey (1980); Fauchald (1982); Pettibone (1954, 1986, 1992, 1993); Nygren (2004), and Carr (2010).

Clade Scolecida

Family Capitellidae

Barantolla americana Hartman, 1963.

Type locality: Central California. Distribution: Amphiboreal-Arctic; 20–887 m.

Capitella capitata (O. Fabricius, 1780) *sensu lato*

Lumbricus capitatus Fabricius 1780; *Lumbricus litoralis* Johnston 1827; *Capitella fabricii* Blainville 1828; *Lumbriconais marina* Örsted 1842; *Lombricus canalium* Nardo 1847; *Saenuris barbata* Grube 1860; *Valla ciliata* Johnston 1865; *Ancistria acuta* Verrill 1874; *Capitella capitata belgica* Czerniavsky 1881; *Capitella capitata danica* Czerniavsky 1881; *Capitella capitata hebridarum* Czerniavsky 1881; *Capritella capitata neapolitana* Czerniavsky 1881; *Capritella capitata suchumica* Czerniavsky 1881; *Capitella prototypa* Czerniavsky 1881; *Capitella similis* Czerniavsky 1881; *Matla bengalensis* Stephenson 1908.

Type locality: Greenland. Distribution: Cosmopolitan, chiefly in the Northern Hemisphere; intertidal zone and estuarine mudflats.

Heteromastus filiformis (Claparède, 1864).

Capitella filiformis Claparède 1864.

Type locality: Mediterranean Sea. Distribution: Widespread in the Pacific region, including the Bering and Chukchi seas, and Atlantic Ocean; Australia, Victoria to Queensland; Mediterranean Sea; intertidal zone.

Heteromastus filobranchus Berkeley and Berkeley, 1932.

Type locality: Nanoose Bay, British Columbia. Distribution: Southeast Alaska to southern California; continental shelf and slope depths.

Mediomastus californiensis Hartman, 1944.

Type locality: Tomales Bay, California. Distribution: Southeast Alaska to southern California; New England to Chesapeake Bay; Gulf of Mexico; intertidal to continental shelf depths.

Notomastus giganteus Moore, 1906.

Type locality: Freshwater Bay, Chatham Strait, Southeast Alaska. Distribution: Southeast Alaska to southern California; littoral zone.

Notomastus tenuis Moore, 1909.

Notomastus (Clistomastus) tenuis: Hartman 1947; *Notomastus angulatus* Chamberlin 1919, Berkeley 1929, McGinitie 1935.

Type locality: San Diego, California. Distribution: Southern Alaska to southern California; intertidal to continental shelf depths.

Family Arenicolidae

Abarenicola claparedi oceanica (Healy and Wells, 1959).

Abarenicola vagabunda oceanic Healy and Wells 1959.

Type locality: Dutch Harbor, Unalaska. Distribution: Aleutian Islands to northern California; northern Japan; intertidal zone.

Abarenicola pacifica Healy and Wells, 1959.

Type locality: False Bay, Washington. Distribution: Alaska to northern California; Japan; intertidal zone.

Arenicola marina glacialis Murdoch, 1885.
Arenicola glacialis Murdoch 1885.
Type locality: Point Barrow, Alaska. Distribution: Known only from type locality; littoral zone.

Family Maldanidae (bamboo worms)

Asychis lacera (Moore, 1923).
Maldane lacera Moore 1923.
Type locality: Point Loma, California. Distribution: Southern Alaska to southern California; continental slope and basin depths, to 1070 m.

Asychis similis (Moore, 1906).
Maldane similis Moore 1906; *Chirimia similis* (Moore 1906).
Type locality: Freshwater Bay, Chatham Strait, Southeast Alaska. Distribution: Southeast Alaska to British Columbia; to a depth of 536 m.

Axiothella catenata (Malmgren, 1865).
Axiothea catenata Malmgren 1865; *Axiothea catenula* Verrill 1874.
Type locality: Sweden. Distribution: Southern Alaska; North Atlantic; Arctic Ocean; depth unknown.

Axiothella rubrocincta (Johnson, 1901).
Clymenella rubrocincta Johnson 1901.
Type locality: Puget Sound, Washington. Distribution: Southern Alaska to southern California; intertidal and continental shelf depths.

Clymenella tentaculata Moore, 1906.
Type locality: Chatham Strait, Alaska. Distribution: Known only from type locality; 516–536 m.

Clymenura columbiana (Berkeley, 1929).
Leiochone columbiana Berkeley 1929.
Type locality: Departure Bay, Nanaimo, British Columbia. Distribution: Southern Alaska to Washington; to a depth of 20 m.

Clymenura polaris (Théel, 1879).
Praxilla polaris Théel 1879; *Leiochone polaris* (Théel 1879).
Type locality: Novaya Zemlya, Arctic Ocean. Distribution: Arctic Ocean, including Arctic Alaska in the Beaufort Sea; 20–759 m.

?Maldane glebifex Grube, 1860.
Maldane glebifex transversimaculata Arwidsson 1912.
Type locality: Mediterranean Sea. Distribution: Chukchi Sea to southern California; eastern Atlantic; 1420 m.

Maldane sarsi Malmgren, 1865.
Clymene koreni Hansen 1878; *Maldane sarsi tropica* Monro 1937.
Type locality: Sweden. Distribution: Cosmopolitan, including Alaska in the Chukchi and Beaufort seas to southern California; continental shelf and slope depths.

Maldanella robusta Moore, 1906.
Type locality: Kasaan Bay, Prince of Wales Island, Alaska. Distribution: Behm Canal and Kasaan Bay, Alaska; Strait of Georgia; 57–439 m.

Nicomache lumbricalis (O. Fabricius, 1780).
Sabella lumbricalis Fabricius 1780; *Clymene lumbricalis*: Savigny in Lamarck 1818; *Clymene microcephala* Schmarda 1861; *Nicomache capensis* McIntosh 1885; *Nicomache carinata* Moore 1906.
Type locality: Greenland. Distribution: Alaska in the Chukchi and Beaufort seas, to southern California; North Atlantic; continental shelf and slope depths, to 2560 m.

Nicomache personata Johnson, 1901.
Type locality: Alki Point, Washington. Distribution: Alaska to southern California; continental shelf and slope depths.

Notoproctus pacificus (Moore, 1906).
Lumbriclymene pacifica Moore 1906.
Type locality: Chatham Strait, Alaska. Distribution: Alaska to southern California; continental shelf to abyssal depths.

Petaloproctus borealis Arwidsson, 1906.
Petaloproctus tenuis borealis Arwidsson 1906.
Type locality: Scandinavia. Distribution: Southern Alaska to British Columbia; Arctic Ocean; North Atlantic; littoral zone.

Petaloproctus tenuis (Théel, 1879).
Maldane tenuis Théel 1879.
Type locality: Novaya Zemlya, Arctic Ocean. Distribution: Amphiboreal-Arctic; 140–676 m.

Praxillella gracilis (M. Sars, 1861).
Clymene gracilis Sars 1861.
Type locality: Norway. Distribution: Southern Alaska to southern California; North Atlantic: Western Europe; continental shelf, slope, and abyssal depths.

Praxillella praetermissa (Malmgren, 1865).
Praxilla praetermissa Malmgren 1865; *Iphianissa praetermissa* (Malmgren 1865); *Praxilla arctica* Malmgren 1867; *Praxillella praetermissa capensis* McIntosh 1905.
Type locality: Norway. Distribution: Amphiboreal-Arctic; 23–204 m.

Rhodine bitorquata Moore, 1923.
Type locality: Monterey Bay, California. Distribution: Bering and Chukchi seas to southern California; continental shelf, slope, basin, and canyon depths.

Rhodine loveni Malmgren, 1865.
Rhodine loveni var. *robustior* Tauber 1879.
Type locality: Sweden. Distribution: Widespread in the Arctic, North Pacific, North Atlantic to the Mediter-

ranean Sea, North Sea, Skagerrak, western Baltic Sea; upper sublittoral zone to 1650 m.

Family Cossuridae

Cossura longocirrata Webster and Benedict, 1887.
Type locality: Maine, western North Atlantic Ocean. Distribution: Amphiboreal-Arctic, including Bering and Chukchi seas; 20–997 m.

Cossura pygodactylata Jones, 1956.
Cossura longocirrata: Jones 1954; *Cossura* nr. *longicirrata*: Hartman 1954; *Cossura lepida* Tamai 1986.
Type locality: San Francisco Bay, central California. Distribution: Gulf of Alaska to California; ?Northeast Atlantic; continental shelf depths.

Family Orbiniidae

Haploscoloplos elongatus (Johnson, 1901).
Scoloplos elongata Johnson 1901; *Scoloplos (Scoloplos) pugettensis* Pettibone 1957.
Type locality: Puget Sound, Washington. Distribution: Alaska in the Beaufort Sea, to Mexico; Chile; intertidal zone to 220 m.

Haploscoloplos panamensis Monro, 1933.
Haploscoloplos alaskensis Hartman 1948.
Type locality: Panama, Pacific Ocean. Distribution: Southern Alaska to Panama; 10–46 m.

Leitoscoloplos pugettensis (Pettibone, 1957).
Scoloplos elongate Johnson 1901, Treadwell 1914, Berkeley 1927, Berkeley and Berkeley 1952; *Haploscoloplos elongata*: Hartman 1944, 1955; *Haploscoloplos elongates*: Hartman 1957, 1960, 1963, 1969, Fauchald 1972, Parkinson 1978, *non* Imajima and Hartman 1964; *Scoloplos (Scoloplos) pugettensis* Pettibone 1957.
Type locality: Puget Sound, Washington. Distribution: Alaska to Mexico; intertidal zone to 220 m.

Naineris dendritica (Kinberg, 1867).
Anthostoma dendriticum Kinberg 1867; *Naineris robusta* Moore 1909 (*fide* Hartman 1957); *Naineris longa* Moore 1909 (*fide* Hartman 1957); *Naineris nannobranchia* Chamberlin 1919; *Naineris laevigata*: Berkeley and Berkeley 1941 (non Grube 1855).
Type locality: Vancouver, British Columbia. Distribution: Alaska to southern California; Gulf of Mexico; western Florida; intertidal zone to 35 m.

Naineris quadricuspida (O. Fabricius, 1780).
Nais quadricuspida Fabricius 1780; *Scoloplos minor* Örsted 1842; *Theodisca mamillata* Cunningham and Ramage 1888.
Type locality: Greenland. Distribution: Bering Strait; Russian Pacific; North Atlantic; intertidal and littoral zones.

Naineris uncinata Hartman, 1957.
Naineris (Naineris) berkeleyorum Pettibone 1957.
Type locality: South Slough, Coos Bay, Oregon. Distribution: Alaska to southern California; to a depth of 622 m.

Scoloplos (Scoloplos) acmeceps Chamberlin, 1919.
Type locality: Laguna Beach, California. Distribution: Alaska to Mexico; intertidal zone to shallow subtidal zone.

Scoloplos (Scoloplos) armiger (Müller, 1776).
Type locality: Norway. Distribution: Arctic Ocean; Alaska to southern California; western North Pacific; North Atlantic; littoral zone.

Family Paraonidae

Aricidea nolani Webster and Benedict, 1887.
Allia nolani (Webster and Benedict 1887).
Type locality: Maine, western North Atlantic. Distribution: Amphiboreal-Arctic; Gulf of Mexico; 21–3511 m.

?***Aricidea (Allia) ramosa*** Annenkova, 1934.
Aricidea ramosa Annenkova 1934; *Aricidea (Aedicira) ramosa*: Hartman 1963; *Aedicira ramosa*: Hartman 1969; *Aricidea (Aricidea) ramosa*: Banse and Hobson 1968.
Type locality: Siberian Arctic. Distribution: Arctic seas; ?Alaska to southern California; western North Pacific, including Japan; 44–2400 m.

Aricidea suecica Eliason, 1920.
Aricidea heteroseta Hartman 1948; *Allia suecia* (Eliason 1920).
Type locality: Sweden. Distribution: Russian Arctic to southern Alaska; Greenland; Davis Strait to Massachusetts; eastern North Atlantic; littoral and bathyal zones.

Aricidea uschakovi Zachs, 1925.
Aricidea longicornuta Berkeley and Berkeley 1950.
Type locality: Kola Fjord, Russia, Arctic Ocean. Distribution: Eastern North Pacific, Alaska to California; western North Pacific; 26–1618 m.

Levinsenia gracilis (Tauber, 1879).
Aonides gracilis Tauber 1879; *Levinsenia gracilis*: Mesnil and Caullery 1898; *Paraonis (Paraonis) gracilis*: Cerruti 1909, Pettibone 1963; *Paraonis gracilis*: Eliason 1920; *Paraonis gracilis gracilis*: Day 1967; *Paraonis gracilis minuta* Hartmann-Schröder 1965 (*fide* Strelzov 1973); *Paraonis (Paraonides) gracilis*: Monro 1930; *Paraonis filiformis* Hartman 1953 (*fide* Hartman 1957); *Paraonis ivanovi* Annenkova 1934; *Paraonis filiformis* Hartman 1953; *Tauberia gracilis*: Strelzov 1973.
Type locality: Denmark. Distribution: Cosmopolitan in continental shelf and slope depths; widely distributed from the Arctic to the Antarctic in the Atlantic, the Russian Pacific, and the Bering and Chukchi seas; shallow subtidal to 3000+ m.

Family Opheliidae

Ammotrypane aulogaster Rathke, 1843.

Ammotrypane fimbriata Verrill 1873; *Ammotrypane gracile* McIntosh 1885.

Type locality: Norway. Distribution: Alaska in the Bering Sea, to western Mexico; North Atlantic; intertidal to continental shelf and canyon depths.

Remarks: Several authors (Hartmann-Schröder, 1971; Fauchald, 1977) accepted *Ophelina* as the valid genus for species previously referred to *Ammotrypane*.

Armandia brevis (Moore, 1906).

Ammotrypane brevis Moore 1906; *Ammotrypane multipapillata* Annenkova 1938; *Armandia bioculata* Hartman 1938.

Type locality: Icy Cape, Alaska. Distribution: Southern Alaska to central California; intertidal and continental shelf depths.

Ophelia borealis Quatrefages, 1866.

Type locality: Greenland. Distribution: Bering Sea; Greenland; North Sea; Irish Sea; intertidal and littoral zones.

Ophelia limacina (Rathke, 1843).

Ammotrypane limacina Rathke 1843; *Ophelia eruciformis* Johnston 1865; *Ophelia taurica* Bobretzky 1881.

Type locality: Norway. Distribution: Cosmopolitan, including southern Alaska to southern California; intertidal zone.

Ophelina abranchiata Støp-Bowitz, 1948.

Ammotrypane abranchiata (Støp-Bowitz 1948).

Type locality: Greenland, Arctic Ocean. Distribution: Atlantic-boreoarctic, including Arctic Alaska in the Beaufort Sea; 447–2800 m.

Ophelina acuminata Örsted, 1843.

Ammotrypane ingebrigtsenii Kükenthal 1887; *Ophelia acuminata* (Oersted 1843).

Type locality: Denmark. Distribution: Cosmopolitan, including Alaska to Mexico; littoral zone.

Ophelina breviata (Pettibone, 1954).

Ammotrypane brevita Ehlers 1913; *Ophelina brevita* (Ehlers 1913).

Type locality: Kaiser Wilhelm Land, Antarctica. Distribution: Alaska to Oregon; Antarctica; to 385 m.

Ophelina cylindricaudata (Hansen, 1878).

Ammotrypane cylindricaudatus Hansen 1878.

Type locality: Norway. Distribution: Amphiboreal-Arctic; 20–1926 m.

Travisia brevis Moore, 1923.

Type locality: Point Loma, California. Distribution: Beaufort and Bering seas; Alaska to southern California; Okhotsk Sea; 18–335 m.

Travisia carnea Verrill, 1873.

Travisia forbesi Murdoc 1885 (non *T. forbesii* Johnston 1840).

Type locality: Massachusetts. Distribution: Arctic Alaska; Massachusetts to Long Island Sound; 5–35 m.

Travisia forbesii Johnston, 1840.

Travisia forbesi Johnston 1840; *Ophelia mamillata* Örsted 1842; *Ophelia mamillata crassa* Örsted 1843; *Ammotrypane oestroides* Rathke 1843.

Type locality: Great Britain. Distribution: Widespread in the Arctic; North Pacific; North Atlantic, North Sea to Baltic; upper sublittoral zone.

Travisia pupa Moore, 1906. Pupa utility-worm.

Type locality: Strait of Georgia, British Columbia. Distribution: Alaska to Oregon; littoral zone.

Family Scalibregmidae

Asclerocheilus beringianus Uschakov, 1955.

Type locality: Bering Sea. Distribution: Bering Sea to Oregon; North Atlantic; littoral zone.

Scalibregma californicum Blake in Blake, Hilbig, and Scott, 2000.

Type locality: Santa Maria Basin, off Point Sal, California. Distribution: Gulf of Alaska to California; continental shelf and slope depths.

Scalibregma inflatum Rathke, 1843

Oligobranchus groenlandicus Sars 1846; *Oligobranchus roseus* Sars 1846; *Scalibregma brevicauda* Verrill 1873; *Scalibregma abyssorum* Hansen 1882; *Eumenia crassa arctica* Wirén 1883; *Scalibregma minutum* Webster and Benedict 1887; *Scalibregma inflatum corethrurum* Michaelsen 1898.

Type locality: Norway. Distribution: Cosmopolitan, including Beaufort and Chukchi seas to Baja California, Mexico; continental shelf, slope, and basin depths.

Clades Palpata, Aciculata, Phyllodocida, Aphroditiformia, and Aphroditoidea

Family Aphroditidae

Aphrodita japonica Marenzeller, 1879.

Aphrodite japonica Marenzeller 1879; *Aphroditella japonica* (Marenzeller 1879); *Aphrodita refulgida* Moore 1910; *Aphrodita cryptommata* Essenberg 1917; *Aphrodita leioseta* Chamberlin 1919.

Type locality: Southern Japan. Distribution: Alaska south to Ecuador; depths to 1170 m; common.

Aphrodita negligens Moore, 1905. Sea mouse or bristle worm.

Type locality: Japan. Distribution: Bering Sea to Mexico; Japan; 20–534 m; common.

Aphrodita parva Moore, 1905.

Type locality: Strait of Georgia. Distribution: Alaska south to Mexico; 5–1220 m.

Laetmonice pellucida Moore, 1903.

Type locality: Bering Sea. Distribution: Bering Sea to southern California; 115–1227 m.

Family Polynoidae (scale worms)

Arcteobia anticostiensis (McIntosh, 1874).

Eupolynoe anticostiensis McIntosh 1874; *Eucranta anticostiensis* (McIntosh 1874).

Type locality: Gulf of St. Lawrence, western North Atlantic. Distribution: Amphiboreal-Arctic; to a depth of 137 m.

Arcteobia spinelytris Uschakov in Annenkova, 1937.

Type locality: Sea of Okhotsk. Distribution: ?Southeast Alaska and British Columbia; Japan to western Bering Sea; 30–591 m.

Arctonoe fragilis (Baird, 1863). Fragile or frilled scaleworm.

Lepidonotus fragilis Baird 1863; *Halosydna fragilis* (Baird 1863).

Type locality: Esquimalt Harbour, Vancouver Island, British Columbia. Distribution: Alaska Peninsula to San Francisco Bay, California; low intertidal zone to 275 m.

Remarks: Commensal, most often found on the seastar *Evasterias troschelii,* but also on *Leptasterias aequalis, L. hexactis, Orthasterias koehleri, Stylasterias forreri, Luidia foliata, Pisaster ochraceous,* and *Solaster dawsoni.*

Arctonoe pulchra (Johnson, 1897). Red commensal scale worm.

Polynoe pulchra Johnson 1897; *Acholoe pulchra* (Johnson 1897); *Halosydna leioseta* Chamberlin 1919.

Type locality: Monterey Bay, California. Distribution: Diomede Islands in the Bering Strait, to Baja California, Mexico; Japan; Okhotsk Sea; low intertidal zone to 275 m.

Remarks: Lives commensally with sea stars such as *Solaster stimpsoni, Pteraster tesselatus, Luidia foliata,* and *Dermasterias imbricata*; sea cucumbers such as *Parastichopus californicus* and *P. parvimensis*; and other invertebrates such as *Cryptochiton stelleri, Diodora aspera, Megathura crenulata,* and terebellid polychaetes such as *Loimia montagui.*

Arctonoe vittata (Grube, 1855). Red-banded commensal scale worm.

Polynoe vittata Grube 1855; *Lepidonotus lordi* Baird 1863; *Polynoe lordi* (Baird 1863); *Halosydna succiniseta* Hamilton 1915; *Arctonoe lia* Chamberlin 1920.

Type locality: Alaska. Distribution: Alaska to Ecuador; Japan; intertidal zone to 22 m.

Remarks: Often found commensally with *Fissurella* or other gastropods and sometimes with seastars and *Cryptochiton stelleri.*

Bylgides elegans (Théel, 1879).

Antinoe sarsi Malmgren 1865 (in part), Pettibone 1954 (non Malmgren); *Antinoe promamme* Malmgren 1867 (in part); *Bylgia elegans* Théel 1879; *Antinoella sarsi*: Pettibone (non Malmgren 1865); *Antinoella plumosa:* Fauchald 1974 (in part; non Fauchald 1972).

Type locality: Kara Sea. Distribution: Circumpolar; Chukchi and Bering seas; Kara Sea; Spitsbergen Archipelago, Norway, to Labrador, Canada; 9–382 m.

Bylgides macrolepidus (Moore, 1905).

Antinoe macrolepida Moore 1905; *Antinoella macrolepida*: Uschakov 1958.

Type locality: Chatham Strait, Southeast Alaska. Distribution: Gulf of Alaska to central California; southern Sakhalin in Sea of Okhotsk; 53–537 m.

Bylgides promamme (Malmgren, 1867).

Antinoe sarsi Kinberg in Malmgren 1865 (in part); *Antinoe promamme* Malmgren 1867 (in part; records from Spitsbergen); *Polynoe badia* Théel 1879 [in part; non *P. badia* variety; not fig. 11 (= *B. groenlandicus*)]; *Polynoe (Laenilla) glaberrima* Hansen 1880 (fide Loshamn 1980); *Polynoe glaberrima* Hansen 1882 (fide Loshamn 1980); *Antinoe badia*: Pettibone 1956 (in part; not record from Franz Josef Land).

Type locality: Spitsbergen Archipelago, Norway. Distribution: Circumpolar; Arctic Alaska; Kara Sea; Spitsbergen Archipelago; Baffin Island; Labrador; 9–245 m.

Bylgides sarsi (Kinberg in Malmgren, 1866).

Antinoe sarsi Kinberg in Malmgren 1866; *Antinoella sarsi* (Kinberg in Malmgren 1866); *Harmothoe sarsi* (Kinberg in Malmgren 1865); *Polynoe sarsi* (Kinberg in Malmgren 1866).

Type locality: Europe. Distribution: Amphiboreal-Arctic; 23–1643 m.

Enipo chuckchi Uschakov, 1982.

Type locality: Chukchi Sea, Arctic Ocean. Distribution: Known only from type locality; depth unknown.

Enipo cirrata Treadwell, 1925.

Type locality: Kotzebue Sound, Alaska. Distribution: Alaska to British Columbia; 30–128 m.

Enipo gracilis Verrill, 1874.

Polynoe gaspeensis McIntosh 1874; *Polynoe gracilis* (Verrill 1874); *Polynoe tarasovi* Annenkova 1937.

Type locality: Maine, western North Atlantic. Distribution: Amphiboreal-Arctic; to a depth of 137 m.

Enipo torelli (Malmgren, 1866).

Nemidia torelli Malmgren 1866; *Nemidia lawrencii* McIntosh 1874.

Type locality: Spitsbergen, Arctic Ocean. Distribution:

Widespread in the Arctic, including the Beaufort and Chukchi seas; north Japan; North Atlantic; 7–1624 m.

Eucranta villosa Malmgren, 1866.

Harmothoe villosa (Malmgren 1866); *Eupolynoe occidentalis* McIntosh 1874.

Type locality: Sweden. Distribution: Amphiboreal-Arctic; 48–109 m.

Eunoe barbata Moore, 1910.

Type locality: Santa Cruz Light, Monterey Bay, California. Distribution: Alaska to California; to a depth of 82 m.

Eunoe clarki Pettibone, 1951.

Type locality: Point Barrow, Alaska, Arctic Ocean. Distribution: Arctic Ocean; littoral zone.

Eunoe depressa Moore, 1905. Depressed scaleworm.

Type locality: Icy Cape, Alaska. Distribution: Alaska to Washington; western North Pacific; 10 to >100 m; common.

Eunoe nodosa (M. Sars, 1861). Rough-noded or giant scaleworm.

Polynoe nodosa Sars 1861; *Lepidonotus pharetratus* Johnston 1865; *Antinoe zetlandica* Lankester 1866; *Harmothoe nodosa*: Hartmann-Schrör 1971.

Type locality: Norway. Distribution: Circumpolar; Arctic Ocean; Bering Sea to British Columbia; northern Sea of Japan; Iceland; Scandinavian coasts to English Channel; Hudson Bay to New Jersey; sublittoral zone to 1260 m; common.

Eunoe oerstedi Malmgren, 1865. Multi-pronged scaleworm.

Lepidonote scabra Örsted 1843; *Polynoe arctica* Hansen 1878; *Harmothoe (Eunoe) oerstedi* (Malmgren 1865).

Type locality: North Atlantic. Distribution: Widely distributed in the Arctic including Chukchi Sea; Bering Sea to central California; Yellow Sea; Japan; Norway to English Channel; Labrador to Rhode Island; known from nearshore, bathyal, and infralittoral depths.

Eunoe senta (Moore, 1902). Thorny scaleworm.

Gattyana senta Moore 1902.

Type locality: Icy Cape, Alaska. Distribution: Alaska to California; 27–421 m.

Eunoe uniseriata Banse and Hobson, 1968. Single-row scaleworm.

Type locality: Puget Sound, Washington. Distribution: Alaska to Washington; shallow subtidal zone.

Gattyana amondseni (Malmgren, 1867).

Nychia amondseni Malmgren 1867.

Type locality: Spitsbergen Archipelago, Norway. Distribution: Arctic Alaska; Norway; Hudson Bay to Rhode Island; upper sublittoral zone to 700 m.

Gattyana brunnea Hartman, 1966.

Type locality: Santa Catalina Island, southern California. Distribution: Southern Alaska to southern California; 549 m.

Gattyana ciliata Moore, 1902. Ciliated scale worm.

Type locality: Icy Cape, Alaska. Distribution: Alaska to Washington; western North Pacific; 25–80 m.

Gattyana cirrhosa (Pallas, 1766).

Aphrodita cirrhosa Pallas 1766; *Gattyana cirrosa* (sic) (Pallas 1766); *Nychia cirrosa* (Pallas 1766); *Aphrodita punctata* Fabricius 1780; *Aphrodita scabra* Fabricius 1780; *Harmothoe scabra* (Fabricius 1780); *Aphrodita filamentosa* Bruguiere 1789; *Aphrodita viridis* Montagu 1815; *Gattyana imbricata* Treadwell 1926.

Type locality: Northern Europe. Distribution: Circumpolar; Alaskan, Canadian, and Siberian Arctic; Bering Sea to Washington; northern Sea of Japan; Davis Strait; Greenland; Spitsbergen; Novaya Zemlya; Iceland; Faroes; Norway to France; Hudson Bay to Massachusetts. Intertidal zone to 1152 m.

Gattyana treadwelli Pettibone, 1949.

Type locality: San Juan Archipelago, Washington Sound, Wasp Passage, between Crane and Shaw Islands. Distribution: Arctic Alaska to Washington; 20–30 m.

Gaudichaudius iphionelloides (Johnson, 1901). White-banded scaleworm.

Harmothoe iphionelloides Johnson 1901; *Gattyana iphionelloides* (Johnson 1901).

Type locality: Puget Sound, Washington. Distribution: Arctic, near the Bering Strait, Kuril Islands to Puget Sound; intertidal zone to 82 m.

Grubeopolynoe tuta (Grube, 1855).

Polynoe tuta Grube 1855; *Harmothoe tuta* (Grube 1855); *Hololepidella tuta* (Grube 1855); *Polyeunoa tuta* (Grube 1855).

Type locality: Sitka, Alaska. Distribution: Alaska to Washington; littoral zone.

Halosydna brevisetosa Kinberg, 1855. Eighteen-scaled, armored, or common scaleworm.

Polynoe brevisetosa: Johnson 1897; *Halosydna nebulosa* Marenzeller 1902.

Type locality: Sausalito, San Francisco Bay, California. Distribution: Southern Alaska to Mexico; northern Sea of Japan; Yellow Sea; Japan; littoral zone.

Harmothoe beringiana Annenkova, 1952.

Type locality: Bering Sea. Distribution: Arctic Ocean, Chukchi Sea, and Bering Sea; littoral zone.

Harmothoe extenuata (Grube, 1840). Yellow and brown scaleworm.

Polynoe extenuata Grube 1840; *Lagisca propinqua* Malmgren 1867; *Lagisca extenuata*: McIntosh 1900, Fauvel 1923; *Harmothoe triannulata* Moore 1910.

Type locality: North Atlantic, off Newfoundland. Distribution: Circumpolar and boreal; Bering Sea to southern California; Sea of Japan; Iceland; Faroes; Norway to Mediterranean and Adriatic seas; Hudson Bay to Chesapeake Bay; South Africa; intertidal zone to 1829 m.

Harmothoe imbricata (Linnaeus, 1767).

Aphrodita imbricata Linnaeus 1767; *Aphrodita cirrata* Müller 1776; *Aphrodita lepidota minuta* Pennant 1777; *Aphrodita plana* Gmelin in Linnaeus 1788; *Lepidonote cirrata* Örsted 1843; *Aphrodita varians* Dalyell 1853; *Aphrodita violacea* Ström in Malmgren 1865; *Harmothoe unicolor* Baird 1865; *Polynoe complanata* Quatrefages 1866; *Polynoe (Harmothoe) imbricata*: Marenzeller 1879; *Polynoe incerta* Bobretzky 1881; *Harmothoe maxillispinosa* de Saint-Joseph 1888; *Harmothoe vesiculosa* Ditlevsen 1917; *Harmothoe levis* Treadwell 1937; *Harmothoe hartmanae* Pettibone 1948.

Type locality: North Sea. Distribution: Circumpolar; Arctic; Bering Sea to southern California; Japan; Labrador to New Jersey; Iceland and Norway to Mediterranean and Adriatic; Indian Ocean; intertidal zone to 230 m.

Harmothoe impar (Johnston, 1839).

Polynoe impar Johnston 1839; *Antinoe impar* (Johnston); *Evarne atlantica* McIntosh 1897.

Type locality: British coast. Distribution: Widespread boreal-Arctic; depth unknown.

Harmothoe multisetosa (Moore, 1902).

Lagisca multisetosa Moore 1902.

Type locality: Icy Cape, Alaska (through an error in locality labels, Moore first described this species as from Greenland, but he later corrected this and showed that it is really an Alaskan form). Distribution: Alaska to Mexico; Arctic Ocean; littoral to depth of 2560 m.

Harmothoe rarispina (M. Sars, 1861).

Polynoe rarispina Sars 1861; *Polynoe rarispina occidentalis* McIntosh 1874; *Lagisca rarispina* (Sars 1861).

Type locality: Norway. Distribution: Arctic-boreal; Chukchi Sea; Alaska to British Columbia; Far Eastern Russian Seas; western North Atlantic; to depths >400 m.

Hermadion truncata (Moore, 1902). Bristly-tail scaleworm.

Harmothoe (Eunoe) truncata Moore 1902.

Type locality: Icy Cape, Alaska. Distribution: Alaska to British Columbia; 30–200 m.

Hermilepidonotus robustus (Moore, 1905).

Lepidonotus robustus Moore 1905.

Type locality: Shelikof Strait, Alaska. Distribution: Southern Alaska; 88–119 m.

Hesperonoe adventor (Skogsberg in Fisher and MacGinitie, 1928).

Harmothoe adventor Skogsberg in Fisher and MacGinitie 1928.

Type locality: Pacific Grove, California. Distribution: Alaska to southern California; intertidal zone to sublittoral.

Remarks: Commensal with *Echiurus echiurus alaskanus* and *Urechis caupo.*

Hololepida magna Moore, 1905. Giant fleshy scaleworm.

Type locality: Halibut Bank, Strait of Georgia, British Columbia. Distribution: Alaska to southern California; to depths >420 m.

Lepidonotus caelorus Moore, 1903.

Polynoe caelora: Izuka 1912.

Type locality: Sagami Bay, Japan. Distribution: Eastern Bering Sea to California; Japan; littoral to depths >2500 m.

Lepidonotus squamatus (Linnaeus, 1758).

Aphrodita squamata Linnaeus 1758; *Aphrodita punctata* Müller 1771; *Aphrodita pedunculata* Pennant 1777; *Aphrodita longirostra* Bruguiere 1789; *Polinoe scutellata* Risso 1826; *Polynoe inflatae* Castelnau 1842; *Polynoe punctata*: Castelnau 1842; *Lepidonote punctata*: Örsted 1843; *Lepidonote armadillo* Leidy 1855; *Lepidonotus granularis* Leach in Johnston 1865; *Lepidonotus verrucosus* Leach in Johnston 1865; *Polynoe dasypus* Quatrefages 1866.

Type locality: North Atlantic Ocean ("*In Pelago*"). Distribution: Cosmopolitan, including Alaska to California; intertidal and infralittoral.

Melaenis loveni Malmgren, 1866.

Melaenis loveni gigantea Wirén 1883.

Type locality: Spitsbergen, Arctic Ocean. Distribution: Amphiboreal-Arctic, including Arctic Alaska; 27–34 m.

Nemidia microlepida Moore, 1910.

Enipo canadensis (Mcintosh 1874).

Type locality: Monterey Bay, California. Distribution: Northeast Pacific; Northwest Atlantic; 50–272 m.

Nemidia tamarae Annenkova, 1952.

Type locality: Bering Strait, Arctic Ocean. Distribution: Arctic Ocean; littoral zone.

Parahalosydna krassini (Annenkova, 1952).

Lepidasthenia krassini Annenkova 1952.

Type locality: Bering Sea. Distribution: Arctic Ocean, Chukchi and Bering Seas; littoral zone.

Family Pholoidae

Pholoe minuta caeca Uschakov, 1950.

Type locality: Sea of Okhotsk. Distribution: Alaska to Washington; western North Pacific; to depths >1300 m.

Pholoides asperus (Johnson, 1897).

Peisidice aspera Johnson 1897; *Pareupholoe fimbriata* Hartmann-Schröder 1962; *Parapholoe tuberculata* Hartmann-Schröder1965; *Peisidice tuberculata:* Hartman and Fauchald 1971, Hartmann-Schröder 1977; *Pholoe minuta*: Blake 1975 (non *Aphrodita minuta* Fabricius 1780); *Pholoides tuberculata*: Carrasco and Gallardo 1983.

Type locality: Monterey Bay, California. Distribution: Southeast Alaska to California; the Galapagos Islands; Chile; low water to 353 m.

Family Sigalionidae

Neoleanira areolata (McIntosh, 1885).

Leanira areolata McIntosh 1885; *Sthenolepis areolata*: Izuka 1912; *Leanira calcis* Hartman 1960.

Type locality: South of Yedo, Japan. Distribution: Bering Sea to Mexico; western North Pacific; 110–4000 m.

Clade Nereidiformia

Family Chrysopetalidae

Chrysopetalum occidentale Johnson, 1897.

Type locality: San Pedro, California. Distribution: Alaska to Mexico; western North Pacific; Gulf of Mexico; intertidal and shallow subtidal zone.

Dysponetus pygmaeus Levinsen, 1879.

Taphus hebes Webster and Benedict 1887.

Type locality: Arctic Ocean. Distribution: Widespread throughout the Arctic; North Atlantic; north Japan Sea; depth to 51 m.

Paleanotus bellis (Johnson, 1897).

Heteropale bellis Johnson 1897; *Paleanotus chrysolepis* Schmarda 1861 (fide Berkeley and Berkeley 1948).

Type locality: Monterey, California. Distribution: Southern Alaska to Mexico; littoral zone.

Family Hesionidae

Nereimyra aphroditoides (O. Fabricius, 1780).

Nereis aphroditioides Fabricius 1780; *Castalia aphroditioides* (Fabricius 1780); *Castalia arctica* Malmgren 1867; *Castalia fabricii* Malmgren 1867; *Psammate aphroditoides*: Chamberlin 1920.

Type locality: Greenland. Distribution: Widely distributed in the Arctic, including Alaskan, Canadian, and Siberian Arctic; Spitsbergen; Franz Josef Land; Novaya Zemlya; Kara Sea; Bering Sea; Denmark; Hudson Bay, Labrador; 4–138 m.

Nereimyra punctata (Müller, 1788).

Nereis rosea Fabricius 1780; *Nereis punctata* Müller 1788; *Castalia punctata* (Müller 1788); *Halimede venusta* Rathke 1843; *Psamathe fusca* Johnston in McIntosh 1908.

Type locality: Norway. Distribution: Amphiboreal-Arctic; 26–3750 m.

Ophiodromus pugettensis (Johnson, 1901). Bat star worm.

Podarke pugettensis Johnson 1901.

Type locality: Alki Point, Puget Sound, Washington. Distribution: Southern Alaska to southern California; Peru; Japan; littoral zone.

Remarks: Often commensal with the bat star, *Patiria*.

Family Nereidae

Alitta brandti Malmgren, 1865. Giant piling worm.

Neanthes brandti (Malmgren 1865); *Nereis brandti* (Malmgren 1865).

Type locality: Siberia, Arctic Ocean. Distribution: Alaska to southern California; littoral zone.

Ceratonereis (Composetia) paucidentata (Moore, 1903).

Nereis paucidentata Moore 1903; *Nereis (Ceratonereis) alaskensis* Treadwell 1921.

Type locality: North of the Aleutian Islands, southern Bering Sea. Distribution: Alaska to southern California; 494 m.

Cheilonereis cyclurus (Harrington, 1897). Red-and-white banded sea-nymph.

Nereis cyclurus Harrington 1897; *Nereis shishidoi* Izuka 1912.

Type locality: Puget Sound, Washington. Distribution: Eastern North Pacific, south to southern California; Japan; shallow subtidal to 68 m.

Remarks: Commensal with large hermit crab species.

Nereis heterophylla Chamisso and Eysenhardt, 1821.

Type locality: Unalaska, Aleutian Islands. Distribution: Known only from type locality; depth unknown.

Nereis heteropoda Chamisso and Eysenhardt, 1821.

Type locality: Unalaska, Aleutian Islands. Distribution: Known only from type locality; depth unknown.

Nereis neoneanthes Hartman, 1948.

Type locality: Moffet Point, Alaska. Distribution: Southern Alaska to Oregon; 110–135 m.

Nereis pelagica Linnaeus, 1758.

Nereis fimbriata Müller 1776; *Nereis verrucosa* Müller 1776; *Nereis ferruginea* Gunnerus (*fide* Fabricious 1780); *Nereis renalis* Johnston 1840; *Heteronereis arctica* Örsted 1843; *Heteronereis assimilis* Örsted 1843; *Nereilepas fusca* Örsted 1843; *Nereis grandifolia* Rathke 1843; *Nereis fulgens* Dalyell 1853; *Nereis denticulata* Stimpson 1854; *Heteronereis grandifolia* Malmgren 1865; *Nereis subulicola* Leach (*fide* Johnston 1865); *Heteronereis migratoria* Quatrefages 1866; *Nereis bowerbanckii* Quatrefages 1866; *Nereis reynaudi* Quatrefages 1866.

Type locality: North Atlantic Ocean ("*In Pelago*").

Distribution: ?Cosmopolitan, including Alaska (Bering Sea) to southern California; littoral zone.

Nereis procera Ehlers, 1868. Little pileworm sea-nymph.

Type locality: Western Canada. Distribution: Southern Alaska to southern California; littoral zone.

Nereis vexillosa Grube, 1851. Banner sea-nymph.

Nereis arctica Grube 1851; *Heteronereis middendorffi* Malmgren 1865; *Mastigonereis spinosa* Kinberg 1866; *Nereis ezoensis* Izuka 1912.

Type locality: Sea of Okhotsk. Distribution: St. Paul Island, Bering Sea to southern California; western North Pacific; littoral zone.

Remarks: Often hides among barnacle and mussel clusters.

Nereis zonata Malmgren, 1867.

Nereis pulsatoria Audouin and Milne Edwards 1834; *Heteronereis glaucopis* Malmgren 1865; *Nereis cylindrata* Ehlers 1868; *Nereis flavipes* Ehlers 1868.

Type locality: Svalbard, Norway. Distribution: Circumpolar, including Alaska to southern California; littoral zone.

Perinereis vallata (Grube, 1858).

Nereis vallata Grube 1858; *Nereilepas pacifica* Schmarda 1861; *Nereis maculata* Schmarda 1861.

Type locality: New Zealand. Distribution: St. Paul Island (Alaska); Chile; southern Australia; New Zealand; depth unknown.

Family Pilargiidae

Ancistrosyllis hamata (Hartman, 1960).

Pilargis hamatus Hartman 1960.

Type locality: Long Beach, southern California. Distribution: Southern Alaska to southern California; 22–1319 m.

Hermundura fauveli (Berkeley and Berkeley, 1941).

Loandalia fauveli Berkeley and Berkeley 1941; *Parandalia fauveli* (Berkeley and Berkeley 1941); *Loandalia americana* Hartman 1947; *Hermundura americana* (Hartman 1947); *Parandalia americana* (Hartman 1947); *Loandalia gracilis* Hartmann-Schröder 1959; *Hermundura gracilis* (Hartmann-Schröder 1959); *Parandalia gracilis* (Hartmann-Schröder 1959).

Type locality: Southern California. Distribution: Southern Alaska to southern California; Belize; Caribbean Sea; Gulf of Mexico; Trinidad and Tobago; littoral zone.

Sigambra tentaculata (Treadwell, 1941).

Ancistrosyllis tentaculata Treadwell 1941.

Type locality: Long Island, New York, Atlantic Ocean. Distribution: Arctic Alaska in the Beaufort Sea, to California; western North Atlantic from New England to North Carolina; northern Gulf of Mexico; northeastern South America; Mediterranean Sea; ?Japan; intertidal zone to 5120 m.

Family Syllidae

Autolytus beringianus Annenkova, 1934.

Type locality: Bering Strait, Arctic Ocean. Distribution: North Pacific; known from rocky shores.

Epigamia alexandri (Malmgren, 1867).

Autolytus alexandri Malmgren 1867; *Autolytus newtoni* Malmgren 1867; *Stephanosyllis ornata* Verrill 1874; *Autolytus longigula* Verrill 1881; *Proceraea (Stephanosyllis) ornata* Webster and Benedict 1887; *Autolytus longeferiens* Saint Joseph 1887; *Autolytus paradoxus* Saint Joseph 1887; *Autolytus verrilli* Marenzeller 1892; *Proceraea rzhavskyi* Britayev and San Martin 2001.

Type locality: Spitsbergen Archipelago, Norway. Distribution: Circumpolar; Alaska to Washington; littoral zone.

Epigamia magna (Berkeley, 1923).

Autolytus magnus Berkeley 1923; *Autolytus beringianus* Annenkova 1934, Uschakov 1955; *Autolytus caterinkae* Uschakov 1950.

Type locality: Nanaimo, Vancouver Island, British Columbia. Distribution: Southern Alaska to British Columbia; Russia; littoral zone to 75 m.

Erinaceusyllis erinaceus (Claparède, 1863).

Sphaerosyllis erinaceus Claparède 1863; *Sphaerosyllis brevifrons* Webster and Benedict 1884.

Type locality: France. Distribution: Cosmopolitan; littoral zone.

Eusyllis blomstrandi Malmgren, 1867.

?*Syllis tubifex* Gosse 1855; *Eusyllis monilicornis* Malmgren 1867; *Eusyllis phosphorea* Verrill 1874.

Type locality: Spitsbergen (Arctic Ocean). Distribution: Bering Sea to Washington; Japan; Arctic Ocean; Labrador to Massachusetts; Ireland to Mediterranean; 45–183 m.

Remarks: Brusa et al. (2013) commented on the nomenclatural history of this species.

Eusyllis collaris (Hartman, 1948).

Typosyllis collaris Hartman 1948.

Type locality: Bering Sea. Distribution: Alaska; 77 m.

Remarks: This species has been considered to be a junior synonym of *E. blomstrandi* (Hartman, 1959a).

Exogone (Exogone) dispar (Webster, 1879).

Paedophylax dispar Webster 1879.

Type locality: Virginia, western North Atlantic. Distribution: Amphiboreal-Arctic; 32–105 m.

Exogone (Exogone) naidina Örsted, 1845.

Exogone naidina Örsted 1845; *Exogone gemmifera* (Pagenstecher 1862); *Exogone kefersteinii* Claparede 1863; *Gossia longiseta* Quatrefages 1866; *Schmardia chauseyana* Quatrefages 1866; *Paedophylax levis* Bobretzky 1870.

Type locality: Norway. Distribution: ?Cosmopolitan, including Bering Sea; littoral zone.

Exogone (Exogone) verugera (Claparède, 1868).

Paedophylax veruger Claparède 1868; *Exogone verugera* (Claparède 1868).

Type locality: Gulf of Naples, Italy. Distribution: ?Cosmopolitan; including Alaska to Mexico and western North Pacific; littoral zone.

Haplosyllis spongiphila (Verrill, 1885).

Syllis spongiphila Verrill 1885.

Type locality: Western North Atlantic (not stated specifically, only that it is found off Martha's Vineyard to Cape Hatteras). Distribution: Southern Alaska to Washington; North Atlantic; littoral zone.

Pionosyllis compacta Malmgren, 1867.

Type locality: Spitsbergen. Distribution: Alaskan and Canadian Arctic; Bering Sea; Spitsbergen; intertidal zone to 143 m.

Pionosyllis gigantea Moore, 1908.

Type locality: Vancouver Island, British Columbia. Distribution: Alaska to southern California; 35–200 m.

Pionosyllis magnifica Moore, 1906.

Eusyllis magnifica (Moore 1906).

Type locality: Port Townsend, Washington. Distribution: Arctic Alaska to Washington; northern Sea of Japan; 25–552 m.

Proceraea cornutus (Agassiz, 1884).

Autolytus cornutus Agassiz 1862; *Autolytus fallax* Malmgren 1867; *Myriana cirrata* Treadwell 1931.

Type locality: Not traced. Distribution: Widely distributed in the Arctic; Alaskan and Canadian Arctic; Greenland; Spitsbergen; Franz Josef Land; Novaya Zemlya; Faroes; Labrador; intertidal zone to 138 m.

Proceraea prismatica (O. F. Müller, 1776).

Nereis prismatica Fabricius 1780; *Amytis prismatica*: Savigny 1822; *Nereisyllis prismatica*: Blainville 1828; *Polybostrichus longosetosus* Örsted 1843; *Polybostrichus longosetus* Örsted 1843; *Autolytus incertus* Malmgren 1867; *Proceraea gracilis* Verrill 1874; *Autolytus trilineatus* Berkeley and Berkeley 1945; *Autolytus (Proceraea) trilineatus* (Berkeley and Berkeley 1945); *Autolytus prismaticus*: Pettibone 1954.

Type locality: Norway. Distribution: Arctic Alaska to British Columbia; North Pacific; North Atlantic to English Channel; littoral zone to 700 m.

Syllis alternata Moore, 1908.

Typosyllis alternata (Moore 1908).

Type locality: Naha Bay, Behm Canal, Southeast Alaska. Distribution: Chukchi Sea to Mexico; western North Pacific; 35–400 m.

Syllis armillaris (O. F. Müller, 1776).

Nereis armillaris O. F. Müller 1776; *Lycastis armillaris* (O. F. Müller 1776); *Syllis (Typosyllis) armillaris* (O. F. Müller 1776); *Typosyllis armillaris* (O. F. Müller 1776); *Nereisyllis ornata* Blainville 1828; *Ioda macrophthalma* Johnston 1840; *Syllis macrophthalma* (Johnston 1840); *Syllis tigrina* Rathke 1843; *Syllis brachychaeta* Schmarda 1861; *Syllis closterobranchia* Schmarda 1861; *Syllis crassicornis* Schmarda 1861; *Syllis lineata* Schmarda 1861; *Syllis syllisformis* (Schmarda 1861); *Trichosyllis syllisformis* Schmarda 1861; *Typosyllis brachychaeta* (Schmarda 1861); *Typosyllis closterobranchia* (Schmarda 1861); *Syllis danica* Quatrefages 1866; *Syllis (Typosyllis) capensis* McIntosh 1885; *Syllis capensis* McIntosh 1885; *Typosyllis (Syllis) capensis* (McIntosh 1885); *Syllis (Typosyllis) alternosetosa* Saint Joseph 1886; *Pionosyllis alternosetosa* (Saint Joseph 1886); *Syllis (Typosyllis) tortugaensis* Augener 1922; *Syllis tortugaensis* Augener 1922.

Type locality: Norway. Distribution: ?Cosmopolitan, including Alaska to southern California; littoral zone.

Syllis cornuta Rathke, 1843.

Syllis (Ehlersia) cornuta Rathke 1843; *Ehlersia (Syllis) cornuta* (Rathke 1843); *Ehlersia cornuta* (Rathke 1843); *Langerhansia cornuta* (Rathke 1843); *Typosyllis (Ehlersia) cornuta* (Rathke 1843); *Typosyllis (Langerhansia) cornuta* (Rathke 1843); *Typosyllis cornuta* (Rathke 1843); *Syllis fabricii* Malmgren 1867; *Syllis pallida* Verrill 1875; *Langerhansia cornuta hystricis* (McIntosh 1902); *Syllis cornuta collingsii* McIntosh 1908; *Syllis (Typosyllis) harti* (Berkeley and Berkeley 1938).

Type locality: Norway. Distribution: ?Cosmopolitan; Alaska to Panama; Arctic; Iceland; Norway to Madeira; Mediterranean; Gulf of St. Lawrence to Florida; South Arabian coast; Red Sea; Persian Gulf; Indian Ocean; West and South Africa; northern Sea of Japan; South Pacific; Antarctic; low water to 2560 m.

Syllis elongata (Johnson, 1901).

Pionosyllis elongata Johnson 1901.

Type locality: Puget Sound, Washington. Distribution: Southern Alaska to Mexico; littoral zone.

Syllis fasciata Malmgren, 1867.

Typosyllis fasciata (Malmgren 1867).

Type locality: Spitsbergen. Distribution: Amphiboreal-Arctic; Caribbean Sea; littoral zone.

Syllis quaternaria Moore, 1906.

Type locality: Point Barrow, Alaska, Arctic Ocean. Distribution: Known only from type locality; "four miles from shore" (Moore, 1906:354); depth unknown.

Syllis variegata Grube, 1860.

Typosyllis variegata (Grube 1860); *Typosyllis (Syllis)* *variegata* (Grube 1860); *Typosyllis (Typosyllis) variegata* (Grube 1860); *Syllis oblonga* Keferstein 1862; *Syllis armoricana* Claparède 1863; *Isosyllis armoricana* (Claparède 1863); *Typosyllis armoricana* (Claparède 1863); *Syllis hexagonifera* Claparède 1864; *Syllis aurantiaca* Claparède 1868; *Typosyllis (Syllis) aurantiaca* (Claparède 1868); *Syllis nigropunctata* Haswell 1886; *Syllis schmardiana* Haswell 1886; *Syllis (Typosyllis) variegata variegata* Cognetti 1954; *Syllis variegata profunda* Cognetti 1954; *Syllis variegata variegata* Cognetti 1954; *Typosylllis variegata profunda* (Cognetti 1954); *Typosyllis cirromaculata* HarCtmann-Schröder 1960.

Type locality: Adriatic Sea. Distribution: ?Cosmopolitan, including southern Alaska to California; littoral zone.

Trypanosyllis aeolis Langerhans, 1879.

Trypanosyllis gemmipera Johnson 1901.

Type locality: Madeira, North Atlantic Ocean. Distribution: ?Cosmopolitan, including southern Alaska to southern California; littoral zone.

Typosyllis adamanteus (Treadwell, 1914).

Trypanosyllis adamanteus Treadwell 1914; *Pionosyllis decorus* Annenkova 1934; *Syllis spenceri* Berkeley and Berkeley 1938; *Syllis stewarti* Berkeley and Berkeley 1942; *Typosyllis stewarti*: Hartman 1948; *Syllis (Typosyllis) decorus* Chlebovitsch 1961.

Type locality: California. Distribution: Alaska to California; western North Pacific; littoral zone.

Typosyllis ehlersioides Marenzeller, 1890.

Type locality: Bering Sea. Distribution: Bering Sea; depth unknown.

Typosyllis pigmentata (Chamberlin, 1919).

Pionosyllis pigmentata Chamberlin 1919; *Typosyllis pulchra occidentalis* Buzhinskaja 1985.

Type locality: California. Distribution: Alaska to southern California; depth unknown.

Typosyllis pulchra (Berkeley and Berkeley, 1938).

Syllis pulchra Berkeley and Berkeley 1938.

Type locality: False Narrows, Nanaimo, British Columbia. Distribution: Southern Alaska to California; 9–46 m.

Phyllodocida unplaced

Family Phyllodocidae

Eteone barbata Malmgren, 1865.

Mysta barbata Malmgren 1865; *Eteone striata* Levinsen 1882.

Type locality: Sweden. Distribution: Amphiboreal-Arctic; 44–498 m.

Eteone californica Hartman, 1936.

Type locality: San Francisco Bay. Distribution: Southern Alaska to central California; intertidal zone to 88 m.

Eteone flava (O. Fabricius, 1780).

Nereis flava Fabricius 1780; *Eteone sarsii* Örsted 1843; *Eteone depressa* Malmgren 1865; *Eteone lentigera* Malmgren 1867; *Eteone fucata* M. Sars in G. O. Sars 1872.

Type locality: Greenland. Distribution: Amphiboreal-Arctic; 21–1144 m.

Eteone longa (O. Fabricius, 1780).

Nereis longa Fabricius 1780; *Eteone arctica* Malmgren 1867; *Eteone islandica* Malmgren 1867; *Eteone leuckarti* Malmgren 1867; *Eteone lilljeborgi* Malmgren 1867; *Eteone robusta* Verrill 1873; *Eteone villosa* Levinsen 1882.

Type locality: Greenland. Distribution: Arctic Ocean; Bering Sea to Mexico; northern Sea of Japan; Iceland, Norway to English Channel; Hudson Bay to North Carolina; intertidal zone to 30 m.

Eteone pacifica Hartman, 1936.

Eteone maculata Treadwell 1922; *Eteone spetsbergensis pacifica* Berkeley and Berkeley 1942.

Type locality: California. Distribution: Gulf of Alaska to California; depth unknown.

Eteone spetsbergensis Malmgren, 1865.

Eteone andreapolis McIntosh 1874.

Type locality: Spitsbergen (Arctic Ocean). Distribution: Circumpolar, including Alaska to British Columbia; littoral zone.

Eulalia viridis (Linnaeus, 1767).

Nereis viridis Linnaeus 1767; *Phyllodoce clavigera* Audouin and Milne Edwards 1833; *Phyllodoce gervillei* Audouin and Milne Edwards 1833; *Eulalia virens* Ehlers 1864; *Eulalia (Eumida) microceros* Claparède 1868; *Eulalia annulata* Verrill 1873; *Eumidia vivida* Verrill 1873; *Eulalia ornata* Saint-Joseph 1888; *Eulalia aurea* Gravier 1896; *Eulalia brevisetis* Saint-Joseph 1899.

Type locality: France, Atlantic Ocean. Distribution: Arctic Ocean; Alaska to Oregon; Japan; China; Indian Ocean; Gulf of St. Lawrence to New Jersey; eastern North Atlantic; littoral zone.

Eumida minuta (Ditlevsen, 1917).

Eulalia minuta Ditlevsen 1917; *Eulalia arctica* Annenkova 1946.

Type locality: Davis Strait. Distribution: Arctic; Point Barrow; Laptev Sea; Novosibirskie Islands; 29–135 m.

Mystides borealis Théel, 1879.

Mystides notialis: Hartmann-Schröder 1963, Pleijel 1993.

Type locality: Novaya Zemlya, Arctic Ocean. Distribution: Circumpolar; intertidal zone to 1500 m.

Notophyllum imbricatum Moore, 1906.

Type locality: Afognak Bay, Alaska. Distribution: Alaska to southern California; Japan; shallow depths.

Phyllodoce citrina Malmgren, 1865.

Anaitides citrina (Malmgren 1865); *Phyllodoce badia* Malmgren 1867.

Type locality: Spitsbergen or Greenland (Arctic Ocean). Distribution: Boreal-Arctic circumpolar; Gulf of Alaska and Pacific coast of Canada; western North Pacific; Far Eastern Seas; Kara Sea; North Sea; to a depth of 37 m.

Phyllodoce groenlandica Öersted, 1843.

Phyllodoce (Anaitides) groenlandica: Uschakov 1972; *Anaitides groenlandica*: Bergström 1914.

Type locality: Greenland. Distribution: Widespread in boreal-Arctic seas; continental shelf depths to about 200 m, some records to 1000 m.

Phyllodoce maculata (Linnaeus, 1767).

Nereis maculata Linnaeus 1767; *Anaitides maculata* (Linnaeus 1767); *Phyllodoce teres* Malmgren 1865; *Phyllodoce pulchella* Malmgren 1867; *Phyllodoce rinki* Malmgren 1867.

Type locality: Northern oceans. Distribution: Alaska (Bering Sea) to Washington; northern Sea of Japan; West Greenland; Iceland; Norway to North Sea; France; Mediterranean; Black Sea; Barents Sea; White Sea; West Africa; Hudson Bay to Rhode Island; intertidal zone to 165 m.

Phyllodoce mucosa Örsted, 1843.

Anaitides mucosa: Gathof 1984.

Type locality: Greenland. Distribution: Alaska to Mexico; western Africa; New England; North Carolina; northern Gulf of Mexico; Cuba; northern Europe; Azores Islands; intertidal zone to 425 m.

Rhynchonerella angelini (Kinberg, 1866).

Kronia angelini Kinberg 1866; *Callizona angelini* (Kinberg 1866); *Callizona grubei* Greeff 1876; *Callizona henseni* Apstein 1900; *Rhynchonerella parva* Chamberlin 1919; *Rhynchonerella pycnocera* Chamberlin 1919; *Eulalia magnapupula* Treadwell 1941.

Type locality: China Sea. Distribution: Cosmopolitan, including southern Alaska; littoral zone.

Family Nephtyidae

Aglaophamus malmgreni (Théel, 1879).

Nephthys atlantica Hansen 1878; *Nephtys malmgreni* Théel 1879; *Nephthys grubei* McIntosh 1900.

Type locality: Europe. Distribution: Amphiboreal-Arctic; 24–4200 m.

Micronephthys minuta (Théel, 1879).

Nephthys minuta Théel 1879; *Nephtys minuta* (Théel 1879).

Type locality: Novaya Zemlya, Barents Sea. Distribution: Arctic Ocean, including Chukchi and Beaufort seas; Barents Sea; White Sea; North Spitsbergen; Bering Sea; Atlantic Ocean, from Canada to Gulf of Mexico; 10–270 m.

Nephtys caeca (O. Fabricius, 1780).

Nereis caeca Fabricius 1780; *Nephtys margaritacea* Johnston 1835; *Nephtys bononensis* Quatrefages 1850; *Nephtys hirsuta* Dalyell 1853; *Nereis (Nephtys) lineata* Dalyell 1853; *Nephtys ingens* Stimpson 1854; *Nephtys oerstedii* Quatrefages 1866; *Nephtys nudipes* Ehlers 1868; *Nephtys caeca* var. *ciliata* McIntosh 1908 (life cycle phase).

Type locality: Greenland. Distribution: Circumboreal; Alaska to central California; western North Pacific; North Atlantic; littoral zone.

Nephtys ciliata (Müller, 1776).

Nereis ciliata Müller 1788; *Nephtys borealis* Örsted 1843.

Type locality: Norway. Distribution: Chukchi and Bering seas to Washington; western North Pacific; North Atlantic; 27–311 m.

Nephtys cornuta Berkeley and Berkeley, 1945.

Nephtys cornuta franciscana Clark and Jones 1955; *Aglaophamus neotenus* Noyes 1980; *Nephtys neotena*: Ohwada 1985.

Type locality: Friday Harbor, Washington. Distribution: Alaska to southern California; eastern Canada to Maine; subtidal zone to 440 m.

Nephtys discors Ehlers, 1868.

Nephthys rickettsi Hartman 1968.

Type locality: Northwest Atlantic. Distribution: Alaskan Arctic to southern California; Japan; Gulf of St. Lawrence to Maine; intertidal zone to 490 m.

Nephtys longosetosa Örsted, 1842.

Nephthys longosetosa Örsted 1842; *Nephthys johnstoni* Ehlers 1874, 1875, McIntosh 1908 (in part); *Nephthys emarginata* Malm 1874 (in part); *Nephthys ciliata* Augener 1913 (in part) (non Müller 1776); *Nephthys ciliata* form. *Longosetosa* Augener 1939.

Type locality: Greenland, Arctic Ocean. Distribution: Pacific Ocean, from Alaska (Bering and Beaufort seas) to California; Sea of Okhotsk, Japan; Yellow Sea; China Sea; Bering Sea; Arctic Ocean (Greenland); Atlantic Ocean (Norway, North Sea, Skagerrak, Kattegat, western Baltic, northwestern Spain); Mediterranean Sea (as far as the Black Sea); lower intertidal zone to 1000 m.

Nephtys paradoxa Malm, 1874.

Nephthys paradoxa Malm 1874; *Nephthys pansa (nomen oblitum)* Ehlers 1874; *Nephthys phyllobranchia* McIntosh 1885; *Nephthys hombergii* Heinen 1911 (in part) (non Savigny in Lamarck 1818); ?*Nephtys schmitti* Hartman 1938; *Nephtys brachycephala* Uschakov 1955 (non Moore 1903).

Type locality: Koster, Bohuslan, Sweden. Distribution: Chukchi Sea; Bering Strait; Bering Sea; Sea of Okhotsk, Japan; Australia; Guatemala; Peru; Chile; Magellan Strait; 50–8000 m.

Nephtys pente Rainer, 1984.

Type locality: North Sea. Distribution: Chukchi Sea; amphiboreal: Eastern Atlantic from the North Sea to Greenland, Barents Sea and Murmansk area; Kraternaya Bay on Yankicha Island (Kuril Islands); depth unknown.

Nephtys punctata Hartman, 1938.

Type locality: Alaska Peninsula. Distribution: Alaska to California; Kamchatka; Japan; 130 to 300 m.

Nephtys rickettsi Hartman, 1938.

Type locality: Cache Bay, Alaska. Distribution: Alaska to southern California; 58–490 m.

Nephtys schmitti Hartman, 1938.

Type locality: Alaska Peninsula. Distribution: Alaska to central California; 400 to 1600 m.

Family Sphaerodoridae

Amacrodorum bipapillatum Kudenov, 1987.

Type locality: Akutan Harbor, Akutan Island, Alaska. Distribution: Known only from type locality; collected at 59 m.

Sphaerodoridium claparedii (Greeff, 1866).

Sphaerodorum claparedii Greeff 1866.

Type locality: Western Europe. Distribution: Beaufort Sea; North Atlantic; Gulf of Mexico; littoral zone.

Sphaerodoropsis biserialis (Berkeley and Berkeley, 1944).

Sphaerodorum biserialis Berkeley and Berkeley 1944; *Sphaerodoridium biserialis*: Lützen 1961.

Type locality: Dease Strait, western Canada. Distribution: Arctic Alaska (Beaufort Sea) to western Mexico; Japan; 47–1144 m.

Sphaerodoropsis katchemakensis Kudenov, 1987.

Type locality: Homer Boat Harbor, Homer, Alaska. Distribution: Katchemak Bay, Alaska; 5–10 m.

Sphaerodoropsis minuta (Webster and Benedict, 1887).

Ephesia minuta Webster and Benedict 1887; *Ephesiella minuta* (Webster and Benedict 1887); *Sphaerodoridium minutum* (Webster and Benedict 1887); *Sphaerodorum minutum* (Webster and Benedict 1887).

Type locality: Maine, western North Atlantic. Distribution: Amphiboreal-Arctic, including Arctic Alaska (Beaufort and Chukchi seas); 24–48 m.

Sphaerodoropsis sphaerulifer (Moore, 1909).

Sphaerodorum sphaerulifer Moore 1909.

Type locality: Monterey Bay, California. Distribution: Alaska to southern California; Sea of Japan; Sea of Okhotsk; littoral zone.

Sphaerodoropsis uzintunensis Kudenov, 1987.

Type locality: Homer Boat Harbor, Homer, Alaska. Distribution: Katchemak Bay, Alaska; 3–15 m.

Sphaerodorum gracilis (Rathke, 1843).

Ephesia gracilis Rathke 1843; *Sphaerodoridium gracilis* (Rathke 1843); *Sphaerodorum flavum* Örsted 1843; *Bebryce peripatus* Johnston in Thompson 1844; *Sphaerodorum peripatus* (Johnston in Thompson 1844); *Pollicita peripatus:* Johnston 1845; *Nereis bullata* Dalyell 1853.

Type locality: Norway. Distribution: Amphiboreal-Arctic; 33–2650 m.

Sphaerodorum papillifer Moore, 1909.

Type locality: San Diego, California. Distribution: Southeast Alaska to western Mexico; depths over 900 m.

Family Tomopteridae

Tomopteris (Johnstonella) pacifica Izuka, 1914. Tailed-Pacific transparent-worm.

Tomopteris kefersteini Greeff 1879; *Tomopteris elegans* Chun 1887; *Tomopteris renata* Berkeley 1930.

Type locality: Japan. Distribution: Northern Alaska to California; Japan; Siberia; surface to 500 m.

Clade Glyceriformia

Family Glyceridae

Glycera capitata Örsted, 1843.

Glycera capitata setosa Örsted 1843; *Glycera setosa* Örsted 1843; *Nereis teres* Dalyell 1853; *Nereis sorex* Leach (*fide* Johnston 1865); *Glycera muelleri* Quatrefages 1866; *Hemipodia canadensis* Treadwell 1937.

Type locality: Greenland. Distribution: Arctic Ocean; Alaska to Baja California, Mexico; western North Pacific; North Atlantic; shallow sublittoral to a depth of approximately 150 m.

Glycera nana Johnson, 1901.

Glycera capitata: Hartman 1950 (in part), 1968 (in part), Lissner et al. 1986, Hyland and Neff 1988, Hyland et al. 1990, non Oersted 1843.

Type locality: Puget Sound, Washington. Distribution: Alaska to central California; 123 to 1020 m.

Glycera robusta Ehlers, 1868.

Glycera longissima Hartman 1940 (non Arwidsson 1899); *Glycera* sp. A: Lissner et al. 1986.

Type locality: California. Distribution: Alaska to southern California; Japan; Gulf of St. Lawrence to Virginia; ?Florida; intertidal zone to 400 m.

Hemipodus borealis (Johnson, 1901).

Hemipodia borealis Johnson 1901.

Type locality: Puget Sound, Washington. Distribution: Alaska to southern California; western Mexico; Chile; Peru; New Zealand; intertidal zone to shallow continental shelf depths.

Family Goniadidae

Goniada annulata Moore, 1905.

Type locality: Yes Bay and Freshwater Bay, Alaska. Distribution: Alaska to Mexico; to a depth of 2560 m.

Goniada brunnea Treadwell, 1906.

Goniada annulata Treadwell 1914 (in part); *Goniada maculata*: Hartman 1940, Berkeley 1941 (non Oersted 1843).

Type locality: Hawaii. Distribution: Alaska to southern California; Hawaii; western North Atlantic; Massachusetts to North Carolina; low intertidal zone to 2855 m.

Goniada maculata Örsted, 1843.

Glycera viridescens Stimpson 1854; *Goniada Alcockiana* Carrington 1865.

Type locality: Denmark. Distribution: Alaska to Washington; North Atlantic; intertidal zone to 3020 m.

Glycinde armigera Moore, 1911.

Glycinde multidens Hartman 1940 (non Müller 1858).

Type locality: Monterey Bay, California. Distribution: Southern Alaska to Central America and the Galapagos Islands; western North Pacific; low intertidal zone to 1100 m.

Glycinde picta Berkeley, 1927.

Glycinde paucignatha Hartmann-Schröder 1959.

Type locality: Nanaimo, British Columbia. Distribution: Southern Alaska to British Columbia; to a depth of 55 m.

Glycinde polygnatha Hartman, 1950.

Type locality: Central California. Distribution: Alaska to southern California; to a depth of 124 m.

Glycinde wireni Arwidsson, 1899.

Type locality: Bering Sea. Distribution: Arctic Alaska to British Columbia; to a depth of 137 m.

Clade Amphinomida

Family Euphrosinidae

Euphrosine bicirrata Moore, 1905.

Euphrosyne bicirrata Moore 1905.

Type locality: Gulf of Georgia to Behm Canal. Distribution: Alaska to Baja California, Mexico; 33–245 m.

Euphrosine hortensis Moore, 1905.

Euphrosyne hortensis Moore 1905.

Type locality: Chilkoot Inlet, Alaska. Distribution: Alaska to southern California; 80–135 m.

Euphrosine multibranchiata Essenberg, 1917.

Type locality: Kodiak Island, Alaska. Distribution: Alaska to British Columbia; depth unknown.

Euphrosine paucibranchiata Hartman, 1960.

Type locality: Santa Cruz Basin, southern California. Distribution: Gulf of Alaska to central America; >1700 m.

Clade Eunicida

Family Dorvilleidae

Dorvillea (Schistomeringos) longicornis (Ehlers, 1901).

Stauronereis longicornis Ehlers 1901; *Stauroneries articulatus* Hartman 1938; *Dorvillea articulate*: Hartman 1968; *Stauronereis rudolphi*: Pettibone 1963 (in part); *Dorvillea atlantica*: Hartman 1968; *Dorvillea rudolphi*: Fauchald 1970 (in part); *Schistomeringos longicornis*: Jumars 1974; *Schistomeringos annulata*: Lissner et al. 1986.

Type locality: Chile. Distribution: Alaska to Chile; intertidal zone to 575 m.

Dorvillea pseudorubrovittata Berkeley, 1927.

Type locality: Vancouver Island, British Columbia. Distribution: Alaska to Oregon; 45 m.

Pettiboneia brevipalpa Hilbig and Ruff, 1990.

Pettiboneia sanmatiensis Lissner et al. 1986 (non Orensanz 1973).

Type locality: Boca de Quadra, Alaska. Distribution: Alaska to central California; 140–1457 m.

Schistomeringos caeca (Webster and Benedict, 1887).

Staurocephalus caecus Webster and Benedict 1887; *Dorvillea caeca* (Webster and Benedict 1887); *Stauronereis caeca* (Webster and Benedict 1887).

Type locality: Massachusetts, western North Atlantic. Distribution: Amphiboreal-Arctic; 23–85 m.

Family Eunicidae

Eunice valens (Chamberlin, 1919). Iridescent tubeworm.

Leodice valens Chamberlin 1919.

Type locality: Mendocino, California. Distribution: Southern Alaska to California; intertidal to 15 m.

Family Lumbrineridae

Eranno bicirrata (Treadwell, 1929).

Lumbrineris bicirrata Treadwell 1929; *Lumbrinereis bicirrata* (Treadwell 1929).

Type locality: Friday Harbor, Washington. Distribution: ?Southern Alaska to western Mexico; shallow subtidal zone to 2500 m.

Lumbrineris heteropoda (Marenzeller, 1879).

Lumbriconereis heteropoda Marenzeller 1879; *Kuwaita heteropoda*: Carrera-Parra and Orensanz 2002.

Type locality: Japan. Distribution: Alaska; British Columbia; Japan; Indo-Pacific (Southern Sakhalin); Yellow Sea; Singapore; India; Persian Gulf; Red Sea; 64–448 m.

Remarks: Ruiz et al.[6] noted that two specimens are known from Alaskan waters, one from Resurrection Bay and one from Glacier Bay. These occurrences are thought to represent introductions (Hines and Ruiz[7]) with ballast water transport being the likeliest mode of introduction (Ruiz et al.[6]). They must not have been aware of Moore's (1908) paper on the polychaetes of the North Pacific coast of North America, who discovered this species in southern Alaska and Vancouver Island.

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[6] Ruiz, G. M., T. Huber, K. Larson, L. McCann, B. Steves, P.

Lumbrineris impatiens (Claparède, 1868).

Lumbriconereis impatiens Claparède 1868; *Lumbriconereis breviceps* Ehlers 1868.

Type locality: France. Distribution: Amphiboreal-Arctic; 23–640 m.

Lumbrineris inflata Moore, 1911.

Lumbrineris cingulata Treadwell 1917 (*fide* Hartman 1959); *Lumbrinereis cervicalis* Treadwell 1922 (*fide* Hartman 1959) ; *Lumbriconereis gurjanovae* Annenkova 1934.

Type locality: Monterey, California. Distribution: Bering Strait to western Mexico; Yellow Sea; Japan; South Africa; Gulf of Mexico; Caribbean Sea; eastern North Atlantic; intertidal zone to 130 m.

Lumbrineris latreilli Audouin and Milne-Edwards, 1834.

Lumbrinconereis latreilli: Fauvel 1923, Okuda 1946; *Lumbrinereis latreilli*: Berkeley and Berkeley 1948.

Type locality: France. Distribution: Cosmopolitan: ?Southern Alaska to Peru; intertidal zone to 2300 m.

Lumbrineris minuta (Théel, 1879).

Lumbriconereis minuta Théel 1879; *Paraninoe minuta* (Théel 1879).

Type locality: Arctic Ocean. Distribution: Circum-Arctic, including Arctic Alaska (Beaufort Sea); 23–4200 m.

?Lumbrineris albidentata sadko Annenkova, 1952.

Type locality: Greenland Sea, Arctic Ocean. Distribution: Bering Sea; Arctic Ocean; littoral zone.

Lumbrineris similabris Treadwell, 1926.

Type locality: Bering Strait. Distribution: Bering Sea to Washington; littoral zone.

Lumbrineris zonata (Johnson, 1901).

Lumbriconereis zonata Johnson 1901; *Lumbrinereis singularisetis* Treadwell 1931; *Scoletoma zonata* (Johnson 1901).

Type locality: Salmon Bay, Puget Sound, Washington. Distribution: Southern Alaska to Baja California, Mexico; littoral zone; common in the intertidal zone.

Paraninoe simpla (Moore, 1905).

Ninoe simpla Moore 1905.

Type locality: Behm Canal, Alaska. Distribution: Southern Alaska; 238–420 m.

Scoletoma fragilis (O. F. Müller, 1766).

Lumbricus fragilis O.F. Müller 1766; *Lumbrineris fragilis* (O.F. Müller 1776); *Lumbriconereis fragilis* (O.F. Müller 1776); *Nereis fragilis* (O.F. Müller 1776); *Lumbriconereis borealis* Kinberg 1865; *Unciniseta swenanderi* Bidenkap 1907.

Type locality: Denmark. Distribution: Amphiboreal-Arctic, including Bering, Chukchi, and Beaufort seas; 23–494 m.

Family Oenonidae

Drilonereis sp.

Distribution: Valdez, Alaska (identified by Arny Blanchard, University of Alaska at Fairbanks); depth unknown.

Family Onuphidae

Nothria conchylega (M. Sars, 1835).

Onuphis conchylega Sars 1835; *Onuphis eschrichti* Örsted 1843; *Onuphis hyperborea* Hansen 1882; *Onuphis jourdei* Marion 1883; *Nothria conchyphila* Verrill 1885; *Onuphis britannica* McIntosh 1903.

Type locality: Norway. Distribution: amphiboreal-Arctic; 48–464 m.

Onuphis geophiliformis (Moore, 1903).

Northia geophiliformis Moore 1903; *Nothria geophiliformis*: Fauchald 1968.

Type locality: Japan, north of Sendai Bay. Distribution: Alaska to southern California; 100–295 m.

?Onuphis pauli Annenkova, 1952.

Type locality: Bering Sea. Distribution: Arctic Ocean (Chukchi Sea); Bering Sea; depth unknown.

Onuphis quadricuspis M. Sars in G. O. Sars, 1872.

Paradiopatra quadricuspis (M. Sars in G. O. Sars 1872); *Sarsonuphis quadricuspis* (M. Sars in G. O. Sars 1872); *Diopatra socialis* Ehlers 1874.

Type locality: Norway. Distribution: Amphiboreal-Arctic; 44–1926 m.

Paradiopatra parva (Moore, 1911).

Onuphis parva Moore 1911, Fauchald 1968; *Sarsonuphis parva*: Fauchald 1982, Lissner et al. 1986, Steinhouer and Imamura 1990.

Type locality: Monterey Bay, California. Distribution: Gulf of Alaska to Baja California; 10–300 m.

Fofonoff, and A. H. Hines. 2006. Biological invasions in Alaska's coastal marine ecosystems: Establishing a baseline. Final Report Submitted to Prince William Sound Regional Citizens' Advisory Council and U.S. Fish and Wildlife Service. Smithsonian Environmental Research Center, Edgewater, Maryland, 112 p.

[7] Hines, A. H., and G. M. Ruiz. 2000. Biological invasions of cold-water ecosystems: Ballast-mediated introductions in Port Valdez/ Prince William Sound, Alaska. Final report to Regional Citizen's Advisory Council of Prince William Sound, 313 p.

Aciculata unplaced

Spinther alaskensis Hartman, 1948.

Type locality: Canoe Bay, Alaska. Distribution: Southern Alaska; 45–73 m.

Spinther wireni Hartman, 1948.

Spinther arcticus Wirén 1883 (non Sars 1851).

Type locality: Bering Sea. Distribution: Arctic Ocean and Bering Sea; depth unknown.

Clades Canalipalpata and Spionida

Family Apistobranchidae

Apistobranchus (Acmira) ornatus Hartman, 1965.

Apistobranchus ornatus Hartman 1965, Banse and Hobson 1968, Banse 1972, Hobson and Banse 1981.

Type locality: Western Santa Barbara Channel, California. Distribution: Gulf of Alaska to southern California; shallow subtidal to continental slope depths.

Apistobranchus tullbergi (Théel, 1879).

Aricia tullbergi Théel 1879; *Skardaria fragmentata* Wesenberg-Lund 1951.

Type locality: Arctic Ocean. Distribution: Amphiboreal-Arctic; 20–189 m.

Family Spionidae

Dipolydora caulleryi (Mesnil, 1897).

Polydora caulleryi Mesnil 1897; *Polydora (Polydora) brachycephala* Hartman 1936.

Type locality: France. Distribution: Amphiboreal-Arctic; 33–140 m.

Dipolydora commensalis (Andrews, 1891).

Polydora commensalis Andrews 1891; *Polydora ciliata brevipalpa* Zachs 1933.

Type locality: Beaufort, North Carolina. Distribution: Alaska to western Mexico; western North Pacific; Atlantic coast of North America; littoral zone.

Dipolydora giardi (Mesnil, 1896).

Polydora giardi Mesnil 1896; *Polydora anoculata* Moore 1907, Blake 1971 (*fide* Maciolek 1984).

Type locality: Western France. Distribution: Alaska to western Mexico; Australia; New Zealand; Europe; Massachusetts to North Carolina; intertidal zone to 200+ m.

Dipolydora socialis (Schmarda, 1861).

Leucodore socialis Schmarda 1861; *Polydora caeca* var. *magna* Berkeley 1927, Pettibone 1967 (*fide* Blake 1979); *Polydora magna*: Berkeley and Berkeley 1936 (*fide* Blake 1979); *Polydora socialis plena* Berkeley and Berkeley 1936, Pettibone 1967 (*fide* Blake 1971); *Polydora caeca*: Berkeley and Berkeley 1936 (non Oersted 1843); *Polydora socialis*: Hartman 1941, Blake 1971, Light 1977, Blake and Kudenov 1978, Johnson 1984; *Polydora plena*: Foster 1971 (*fide* Light 1977); *Polydora neocardalia* Hartman 1961, Lissner et al. 1986, Steinhauer and Imamura 1990; *Polydora carunculata* Radashevsky 1993.

Type locality: Chile. Distribution: Southern Alaska to Chile; Sea of Japan; Australia; Gulf of Mexico; Falkland Islands; intertidal zone to about 400 m.

Laonice cirrata (M. Sars, 1851).

Nerine cirrata Sars 1851; *Scolecolepis cirrata:* Webster and Benedict 1884; *Spionides cirratus:* Webster and Benedict 1887; *Chaetosphaera falconis* Haecker 1898; *Aricidea alata* Treadwell 1901; *Aricideopsis megalops* Johnson 1901; *Laonice pugettensis* Banse and Hobson 1968.

Type locality: Norway. Distribution: Amphiboreal-Arctic; Gulf of Mexico; 44–1738 m.

Marenzelleria wireni Augener, 1913.

Type locality: Franz Josef Land, Arctic Ocean. Distribution: Widespread in the Arctic; depth unknown.

Microspio theeli Söderström, 1920.

Spio mimus Chamberlin 1920.

Type locality: Siberian Arctic Ocean. Distribution: Arctic Ocean, including Arctic Alaska; western North Atlantic; littoral zone.

Polydora limicola Annenkova, 1934.

Polydora ciliata limicola Annenkova 1934.

Type locality: Bering Island, Kamchatka Peninsula, Bering Sea. Distribution: ?Alaska to southern California; western North Pacific; littoral zone.

Prionospio boreus (Chamberlin, 1920).

Anaspio boreus Chamberlin 1920.

Type locality: Collinson Point, Alaska. Distribution: Known only from type locality; depth unknown.

Prionospio cirrifera Wirén, 1883.

Minuspio cirrifera (Wirén 1883); *Laonice cirrata minuta* Augener 1921.

Type locality: Bering Sea. Distribution: Bering Sea south to southern California; to a depth of 560 m.

Prionospio malmgreni Claparède, 1869.

Prionospio capensis McIntosh 1885; *Prionospio bocki* Söderström 1920.

Type locality: Mediterranean Sea. Distribution: Bering, Chukchi, and Beaufort seas; North Atlantic; known from nearshore.

Prionospio (Prionospio) steenstrupi Malmgren, 1867.

Prionospio steenstrupi Malmgren 1867; *Spiophanes tenuis* Verrill 1879 (*fide* Pettibone 1954); *Prionospio tenuis* Verrill 1881 (*fide* Maciolek 1985); *Prionospio malmgreni*: Pettibone 1954 (non Claparède 1870); *Prionospio (Prionospio) fallax*: Johnson 1984 (non Söderström 1920).

Type locality: Iceland. Distribution: Beaufort Sea; Bering Sea; California; Caribbean Sea; Iceland; Greenland; Sweden; New England; continental shelf depths to about 150 m; occasionally in upper slope depths.

Pygospio elegans Claparède, 1863.

Spio rathbuni Webster and Benedict 1884; *Pygospio minutus* Giard 1894; *Spio inversa* Kuhlgatz 1898.

Type locality: Northeast Atlantic (western France). Distribution: Chukchi and Beaufort seas; North Pacific; North Atlantic; Mediterranean Sea; Gulf of Mexico; mid-shore to the sublittoral zone.

Scolecolepides viridis (Verrill, 1873).

Scolecolepis viridis Verrill 1873; *Scolecolepis tenuis* Verrill 1873; *Scolecolepides arcticus* Chamberlin 1920.

Type locality: Cape Cod, Massachusetts. Distribution: Arctic Alaska and Canada; Gulf of Mexico; western North Atlantic; littoral zone.

Scolelepis alaskensis (Treadwell, 1914).

Scolecolepis alaskensis Treadwell 1914.

Type locality: Shumagin Islands, Alaska. Distribution: Popof Island, Shumagin Islands, Alaska; depth unknown.

Spio cirrifera (Banse and Hobson, 1968).

Paraspio cirrifera Banse and Hobson 1968.

Type locality: Puget Sound, Washington (47°44′31″N, 122°31′53″W). Distribution: Gulf of Alaska to Puget Sound; type material collected at 22 m.

Spio filicornis (Müller, 1776).

Nereis filicornis Müller 1776; *Spio gattyi* McIntosh 1909; *Euspio mesnili* McIntosh 1915; *Spio filicornis picta* Zachs 1933.

Type locality: Denmark. Distribution: Cosmopolitan, including Arctic Alaska to central California; western North Pacific; intertidal zone.

Spiophanes bombyx (Claparède, 1870).

Spio bombyx Claparède 1870.

Type locality: France. Distribution: Cosmopolitan; Chukchi Sea to southern California; western North Pacific; southwestern Pacific; North Atlantic; continental shelf and slope depths.

Family Magelonidae

Magelona longicornis Johnson, 1901.

Magelona alata Reish, 1965.

Type locality: Puget Sound, Washington. Distribution: Southeastern Bering Sea (Bristol Bay) to Washington; western North Pacific; 45–134 m.

Family Chaetopteridae

Phyllochaetopterus **sp.**

Distribution: Valdez, Alaska (identified by Arny Blanchard, University of Alaska at Fairbanks); depth unknown.

Spiochaetopterus costarum (Claparède, 1869).

Telepsavus costarum Claparède 1869; *Telepsavus bonhourei* Gravier 1905; *Telepsavus vitrarius* Ehlers 1908.

Type locality: Italy. Distribution: Southern Alaska to southern California; western North Pacific; North Atlantic; continental shelf and slope depths.

Spiochaetopterus typicus M. Sars, 1856.

Type locality: Norway. Distribution: Amphiboreal-Arctic; 44–717 m.

Family Trochochaetidae

Trochochaeta carica (Birula, 1897).

Disoma carica Birula 1897; *Nevaya whiteavesi* McIntosh 1911.

Type locality: Russia (Arctic Ocean). Distribution: Amphiboreal-Arctic; 23–991 m.

Trochochaeta multisetosa (Örsted, 1844).

Disoma multisetosum Örsted 1844; *Trochochaeta sarsi* Levinsen 1883; *Thaumastoma singulare* Webster and Benedict 1884.

Type locality: Not traced. Distribution: Arctic; North Pacific; North Atlantic; upper sublittoral zone to 700 m.

Clades Terebellida and Cirratuliformia

Family Cirratulidae

Aphelochaeta monilaris (Hartman, 1960).

Tharyx monilaris Hartman 1960; *Tharyx* sp. G: Lissner et al. 1986.

Type locality: Newport Beach, California. Distribution: Alaska to southern California; western North Atlantic; shallow subtidal zone to continental slope depths.

Caulleriella alata maculata (Annenkova, 1934).

Heterocirrus alatus maculatus Annenkova 1934.

Type locality: Bering Strait. Distribution: Bering Sea; depth unknown.

Caulleriella hamata (Hartman, 1948).

Tharyx hamatus Hartman 1948.

Type locality: Alitak Bay, Alaska. Distribution: Alaska to Washington; ?California; intertidal to shallow subtidal zones.

Chaetozone camasetosa Blake, 2015.

Type locality: Boca de Quadra, Southeast Alaska (55°19.2′N, 130°29.2′W). Distribution: Southeast Alaska; British Columbia; 12–95 m.

Chaetozone careyi Blake, 2015.

Chaetozone setosa: Carey et al. 1984 (non Malmgren 1867); *Chaetozone* sp. Goldsmit et al. 2014.

Type locality: Beaufort Sea, Alaskan Arctic (71°19′N, 152°38.5′W). Distribution: Beaufort Sea, Alaska to the Aleutian Islands; Hudson Strait, Canada; intertidal to 55 m.

Chaetozone hobsonae Blake, 2015.

Type locality: Ridley Island, Prince Rupert, British

Columbia, Canada (54°12.352′N, 130°19.966′W). Distribution: Southeast Alaska; British Columbia; shallow water to 95 m.

Chaetozone pigmentata Blake, 2015.

Chaetozone setosa: Pettibone 1954 (in part, not Fig. 33d = *Tharyx alaskensis* Blake 2015), Pettibone 1956, Blake and Dean 1973 (in part, non Malmgren 1867).

Type locality: East Angiak Island, offshore Baffin Island, Canadian Arctic (65°43′N, 62°05′W). Distribution: Point Barrow; Beaufort Sea; Labrador; Baffin Island; 38–245 m.

Chaetozone ruffi Blake, 2015.

Chaetozone setosa: Busdosh 1984 (non Malmgren 1867).

Type locality: Prudhoe Bay; Beaufort Sea, Alaskan Arctic (70°23.9′N, 148°26.0′W). Distribution: Alaskan Arctic; 3 m.

Cirratulus borealis Grube, 1851.

Type locality: Sitka, Alaska. Distribution: Southeast Alaska; eastern North Atlantic; littoral zone.

Cirratulus cirratus (Müller, 1776).

Lumbricus cirratus Müller 1776; *Promenia fulgida* Ehlers 1897.

Type locality: Europe. Distribution: Amphiboreal-Arctic; Mozambique; depth to 50 m.

Cirratulus spectabilis (Kinberg, 1866).

Promenia spectabilis Kinberg 1866; *Caulleriella viridis pacifica*: Berkeley and Berkeley 1942 (non Berkeley 1929) (*fide* Berkeley and Berkeley 1950 and Banse and Hobson 1968); *Caulleriella gracilis*: Berkeley and Berkeley 1950, 1952 (in part) (*fide* Banse and Hobson 1968) (non Moore 1923); *Cirratulus cirratus*: Berkeley and Berkeley 1950, 1952, Hobson and Banse 1981 (non Müller 1776); *Chaetozone berkeleyorum* Banse and Hobson 1968 (*fide* Hobson and Banse 1981).

Type locality: British Columbia. Distribution: Alaska to central California; intertidal zone.

Tharyx alaskensis Blake, 2015.

Chaetozone setosa: Pettibone 1954 (in part, non Malmgren 1867); *Chaetozone* cf. *gracilis*: Busdosh 1984 (non Moore 1923).

Type locality: Prudhoe Bay, Beaufort Sea, Alaskan Arctic (70°24.1′N, 148°32.3′W). Distribution: Beaufort Sea, Alaska; shallow subtidal to 128 m.

Tharyx multifilis Moore, 1909.

Cirratulus inhamatus Treadwell 1937.

Type locality: Monterey Bay or San Diego, California. Distribution: ?Southern Alaska to Baja California, Mexico; intertidal zone.

Tharyx parvus E. Berkeley, 1929.

Tharyx multifilis parvus E. Berkeley 1929; *Aphelochaeta parva*: Blake 1991.

Type locality: Pipers Lagoon, western Canada. Distribution: ?Southern Alaska to southern California; intertidal zone.

Family Acrocirridae

Acrocirrus heterochaetus Annenkova, 1934.

Acrocirrus sp. A: Lissner et al. 1986.

Type locality: Bering Sea. Distribution: Bering Sea and Alaska to southern California; Sea of Japan; Sea of Okhotsk; continental shelf to middle slope depths.

Family Flabelligeridae

Brada incrustata Støp-Bowitz, 1948.

Type locality: Norway. Distribution: Arctic Alaska (Beaufort Sea); eastern North Atlantic; littoral zone.

Brada inhabilis (Rathke, 1843).

Siphonostoma inhabile Rathke 1843; *Brada granosa* Stimpson 1854; *Brada granulata* Malmgren 1867; *Brada normani* McIntosh 1908.

Type locality: Norway. Distribution: Widely distributed in the Arctic, including Alaskan, Canadian, and Siberian Arctic; Bering Sea to Gulf of Alaska; northern Sea of Japan; Davis Strait; Greenland; Novaya Zemlya; Kara Sea; Iceland; Faroes; Norway to Denmark; Labrador to Maine; low water to 1114 m.

Brada nuda Annenkova, 1922.

Type locality: Beaufort Sea, Arctic Ocean. Distribution: Known only from type locality; 47–57 m.

Brada sachalina Annenkova, 1922.

Type locality: Okhotsk Sea. Distribution: Bering and Okhotsk seas; depth unknown.

Brada villosa (Rathke, 1843).

Siphonostoma villosum Rathke 1843; *Trophonia rugosa* Hansen 1882 (*fide* Pettibone 1954); *Trophonia arctica* Hansen 1882 (*fide* Pettibone 1954); *Brada pilosa* Moore 1906 (*fide* Pettibone 1954); *Stylarioides pluribranchiata* Moore 1923 (*fide* Pettibone 1954); *Brada rugosa*: Støp-Bowitz 1948 (*fide* Pettibone 1954); *Brada pluribranchiata*: Hartman 1969.

Type locality: Norway. Distribution: Widespread in the Northern Hemisphere, including Arctic; Alaska to southern California; Japan; both sides of the Atlantic; Mediterranean Sea; intertidal zone to 2500 m.

Diplocirrus longisetosus (Marenzeller, 1890).

Stylarioides longisetosus Marenzeller 1890; *Stylarioides normani* McIntosh 1908.

Type locality: Bering Sea. Distribution: North Atlantic; Arctic Ocean; Bering Sea; littoral and bathyal zones.

Flabelligera affinis M. Sars, 1829.

Flabelligera infundibularis Johnson 1901, Hartman, 1938, 1948, 1961, 1969, Berkeley and Berkeley 1952 (*fide* Pettibone 1954).

Type locality: Norway. Distribution: Widespread in the Northern Hemisphere, including Arctic; Alaska to southern California; Japan; both sides of the Atlantic; Mediterranean Sea; subantarctic locations; low intertidal zone to more than 2500 m.

Flabelligera bophortica Annenkova-Chlopina, 1924.
Type locality: Bering Sea, Arctic Ocean. Distribution: Known only from type locality; depth unknown.

Flabelligera mastigophora Annenkova, 1952.
Type locality: Chukchi Sea. Distribution: Arctic Ocean (Chukchi Sea) and Okhotsk Sea; depth unknown.

Pherusa papillata (Johnson, 1901).
Trophonia papillata Johnson 1901; *Stylarioides plumosa*: Berkeley and Berkeley 1941 (non Müller 1776); *Stylarioides papillata*: Berkeley and Berkeley 1952; *Pherusa neopapillata*: Lissner et al. 1986 (non Hartman 1961).
Type locality: Port Orchard, Washington. Distribution: Alaska to southern California; intertidal zone to 560 m.

Pherusa plumosa (Müller, 1776).
Amphitrite plumosa Müller 1776; *Siphonostomum asperum* Stimpson 1854; *Trophonia plumosa*: Malmgren 1867, Verrill 1881, Webster and Benedict 1887; *Trophonia aspera*: Verrill 1881, Webster and Benedict 1887, Moore 1909; *Trophonia papillata* Johnson 1901; *Stylarioides plumosa*: Eliason 1920; *Stylarioides papillata*: Moore 1923.
Type locality: Norway. Distribution: Widely distributed in the Arctic, including Canadian, Alaskan and Siberian Arctic; Greenland; Spitsbergen; Barents Sea; Novaya Zemlya; Kara Sea; Alaska to British Columbia; Okhotsk Sea to Japan; China; Iceland; Faroes; Norway to France; Adriatic; Iranian Gulf; Labrador to Massachusetts; West Indies; Venezuela; low water to 2946 m.

Family Sternaspidae

Sternaspis fossor Stimpson, 1854. Ground-digger dumb-bell worm.
Type locality: Bay of Fundy, New Brunswick. Distribution: Southern Alaska to southern California; North Atlantic; 10–409 m, possibly to 2800 m.
Remarks: Some researchers (e.g., Austin, 1985) consider this species synonymous with *S. scutata*.

Sternaspis scutata (Ranzani, 1817).
Echinorhynchus scutatus Renier 1807; *Thalassema scutata* Ranzani 1817; *Schreiberius bremsii* Otto 1821; *Sternaspis thalassemoides* Otto 1821; *Sternaspis affinis* Stimpson 1864; *Sternaspis assimilis* Malmgren 1867; *Sternaspis islandica* Malmgren 1867; *Sternaspis costata* Marenzeller 1879; *Echinorhynchus scutatus clypeatus* Renier (*fide* Vejdovsky 1882).
Type locality: Mediterranean Sea. Distribution: Cosmopolitan, including Bering, Chukchi, and Beaufort seas to southern California; littoral to bathyal zones.

Clade Terebelliformia

Family Ampharetidae

Amage anops (Johnson, 1901).
Sabellides anops Johnson 1901.
Type locality: Puget Sound, Washington. Distribution: Southern Alaska to southern California; continental shelf and slope depths.

Amage auricula Malmgren, 1866.
Sabellides brevicaudata Sars 1866; *Sabellides brevicirrata* McIntosh 1922.
Type locality: Sweden. Distribution: Amphiboreal-Arctic; 71–1025 m.

Amage perfecta Moore, 1923.
Type locality: Point La Jolla, California. Distribution: Southern Alaska to southern California; 119–406 m.

Ampharete acutifrons (Grube, 1860).
Amphicteis acutifrons Grube 1860; *Branchiosabella zostericola* Claparède 1863; *Ampharete cirrata* Webster and Benedict 1887.
Type locality: Greenland. Distribution: Alaska (Bering and Chukchi seas) to southern California; Bering Sea to Japan; North Atlantic (Greenland to North Carolina); Mediterranean Sea; 0.5–1400 m.

Ampharete arctica Malmgren, 1866.
Ampharete brevibranchiata Treadwell 1926.
Type locality: Spitsbergen. Distribution: Arctic Ocean; Bering Strait to California; western and eastern North Atlantic; 521–1904 m.

Ampharete crassiseta Annenkova, 1929.
Type locality: Russian waters. Distribution: Alaskan and Russian Arctic; depth unknown.

Ampharete eupalea Chamberlin, 1920.
Ampharete seribranchiata Treadwell 1926.
Type locality: North of Alaska (70°24′N, 161°25′W). Distribution: Arctic Alaska south to British Columbia; 10–18 m.

Ampharete finmarchica (M. Sars, 1864).
Amphicteis finmarchica Sars 1864; *Ampharete arctica* Malmgren 1866; *Ampharete acutifrons*: Steinhauer and Imamura 1990 (non Grube 1860).
Type locality: Norway. Distribution: Arctic Ocean; Alaska to northeastern South America; Japan; Greenland to Denmark; Labrador to New England; intertidal zone to 2900 m.

Ampharete goesi Malmgren, 1866.
Type locality: Spitsbergen. Distribution: Arctic Ocean to southern California; North Atlantic; continental shelf depths.

Ampharete johanseni Chamberlin, 1920.
Type locality: Off Collinson Point, Beaufort Sea, Alaska. Distribution: Known only from type locality; 5 m.

Ampharete reducta Chamberlin, 1920.
Type locality: Off Collinson Point, Beaufort Sea, Alaska. Distribution: Known only from type locality; 5 m.

Ampharete vega (Wirén, 1883).
Amphicteis vega Wirén 1883.
Type locality: Bering Sea. Distribution: Arctic Ocean; Bering Sea; North Atlantic; littoral zone.

Amphicteis alaskensis Moore, 1905.
Type locality: Alitak Bay, Kodiak Island, Alaska. Distribution: Kodiak Island south to Southeast Alaska; 73–91 m.

Amphicteis glabra Moore, 1905.
Type locality: Behm Canal, Alaska. Distribution: Alaska to southern California; continental shelf depths.

Amphicteis gunneri (M. Sars, 1835).
Amphitrite gunneri Sars 1835; *Crossostoma midas* Gosse 1855; *Amphicteis gunneri japonica* McIntosh 1885; *Amphicteis japonica* McIntosh 1885; *Amphicteis groenlandica* Grube 1860; *Amphicteis curvipalea* Claparède 1870.
Type locality: Norway. Distribution: Cosmopolitan; 47–357 m.

Amphicteis scaphobranchiata Moore, 1906.
Type locality: Vancouver Island, Canada. Distribution: Southern Alaska to central California; continental shelf, slope, and abyssal depths.

Amphicteis sibogae Caullery, 1944.
Type locality: Indonesia. Distribution: Southern Alaska; central western Pacific; deep water.

Anobothrus gracilis (Malmgren, 1866).
Ampharete gracilis Malmgren 1866; *Anobothrus bimaculatus*: Lissner et al. 1986.
Type locality: Western Sweden. Distribution: Arctic Ocean; southern Alaska to southern California; Sea of Japan; North Atlantic; Bermuda; 10–2900 m.

Asabellides lineata (Berkeley and Berkeley, 1943).
Pseudosabellides lineata Berkeley and Berkeley 1943; *Sabellides octocirrata*: Berkeley and Berkeley 1942 (non Sars 1835).
Type locality: Hudson Bay, northern Canada. Distribution: Alaska to western Mexico; 15–200 m.

Asabellides sibirica (Wiren, 1883).
Sabellides sibirica Wiren 1883; *Asabellides orientalis* Annenkova 1929; *Neosabellides alaskensis* Treadwell 1943; *Pseudosabellides littoralis* Berkeley and Berkeley 1943.
Type locality: Siberia. Distribution: Bering, Chukchi, and Beaufort seas to British Columbia; western North Pacific; littoral zone.

Glyphanostomum pallescens (Théel, 1879).
Samytha pallescens Théel 1879; *Sabellides pallescens*: Wollebaek 1912.
Type locality: Novaya Zemblya, Arctic Ocean. Distribution: Arctic and Antarctic Oceans; western Canada to southern California; Japan; New England; 45–7100 m.

Lysippe labiata Malmgren, 1866.
Type locality: Spitsbergen. Distribution: Arctic Ocean; Alaska to California; Sea of Japan; Greenland; Iceland; Denmark; Labrador to Massachusetts; 1–1030 m.

Melinna cristata (M. Sars, 1851).
Sabellides cristata Sars 1851.
Type locality: Norway. Distribution: Circumpolar, including Alaska to Oregon; littoral zone.

Melinna denticulata Moore, 1908.
Type locality: Funter Bay, Alaska. Distribution: Alaska to southern California; 180–1070 m.

Melinna elisabethae McIntosh, 1914.
Type locality: London. Distribution: Southern Alaska to Washington; western North Pacific; North Atlantic; littoral zone.

Sabellides borealis M. Sars, 1856.
Type locality: Norway. Distribution: Amphiboreal-Arctic, including Arctic Alaska; 27–44 m.

Family Pectinariidae

Amphictene moorei (Annenkova, 1929). Moore's coneworm.
Pectinaria moorei Annenkova 1929.
Type locality: Siberia. Distribution: Arctic Ocean; Alaska to California; western North Pacific; continental shelf depths.

Cistenides brevicoma (Johnson, 1901).
Pectinaria brevicoma Johnson 1901.
Type locality: Kodiak, Alaska. Distribution: Alaska to southern California; shallow bottoms.

Cistenides granulata (Linnaeus, 1767). Tusk coneworm.
Sabella granulata Linnaeus 1767; *Pectinaria granulata* (Linnaeus 1767); *Amphitrite eschrichtii* Rathke 1843; *Pectinaria groenlandica* Grube 1850; *Pectinaria brevi coma* Johnson 1901.
Type locality: North Atlantic Ocean ("*In Oceano*"). Distribution: Chukchi and Beaufort seas to North Mexico; intertidal zone to 165 m.

Cistenides hyperborea Malmgren, 1866.
Pectinaria hyperborea (Malmgren 1866); *Pectinaria (Cistenides) hyperborea* (Malmgren 1866).
Type locality: Greenland. Distribution: Amphiboreal-Arctic; 20–232 m.

Pectinaria californiensis Hartman, 1941. Straight coneworm.

Type locality: Redondo Beach, California. Distribution: Arctic Alaska to southern California; continental shelf depths.

Family Terebellidae

Amphitrite cirrata O. F. Müller, 1771 in 1776.

Teredeo arenaria Forskål 1775; *Nereis cirrosa* Fabricius 1780; *Amphiro cirrata*: Montagu 1808; *Terebella cirrhata*: Montagu 1818; *Spio cirrata* König in Quatrefages 1866; *Terebella montagui* Quatrefages 1866; *Amphitrite palmata* Moore 1906; *Amphitrite radiata* Moore 1908; *Amphiro foetida* Montagu in McIntosh 1922.

Type locality: Iceland. Distribution: Arctic-boreal; Bering Sea to southern California; Sea of Okhotsk; Sea of Japan; Kamchatka; west coast of Sakhalin; North Atlantic; 40–335 m.

Artacama coniferi Moore, 1905.

Type locality: Gulf of Georgia, British Columbia. Distribution: Alaska to southern California; >200 m.

Artacama proboscidea Malmgren, 1866.

Type locality: Spitsbergen, Arctic Ocean. Distribution: Arctic Ocean; southern Alaska; depth unknown.

Axionice maculata (Dalyell, 1853).

Terebella maculata Dalyell 1853; *Scione lobata* Malmgren 1866.

Type locality: Not traced. Distribution: Alaskan, Canadian, and Russian Arctic; Bering Sea; Sea of Okhotsk; Greenland; Barents Sea; White Sea; Iceland; eastern North Atlantic to the Cameroons; Mediterranean Sea; Norwegian coast from Hordaland to Finnmark; Danish west coast; upper sublittoral zone to 1000 m.

Eupolymnia congruens (Marenzeller, 1884).

Polymnia congruens Marenzeller 1884; *Polymnia nesidensis japonica* Moore 1903; *Eupolymnia nesidensis japonica* (Moore 1903).

Type locality: Eno-sima, Japan. Distribution: Alaska to southern California; Japan; continental slope depths.

Eupolymnia heterobranchia (Johnson, 1901). Brown intertidal spaghetti-worm.

Lanice heterobranchia Johnson 1901; *Eupolymnia crescentis* Chamberlin 1919.

Type locality: Puget Sound, Washington. Distribution: Alaska to Mexico; intertidal zone.

Lanassa nordenskioldi Malmgren, 1866.

Type locality: Spitsbergen. Distribution: Amphiboreal-Arctic; 48–447 m.

Lanassa venusta venusta (Malm, 1874).

Laphaniella venusta Malm 1874; *Leaena nuda* Moore 1905.

Type locality: Sweden. Distribution: Circumpolar; Alaskan, Canadian, and Siberian Arctic; southwestern Alaska; northern Sea of Japan; Danish waters; Labrador; 13–258 m.

Laphania boecki Malmgren, 1866.

Laphania boecki hystricis McIntosh 1915.

Type locality: Finnmark. Distribution: Amphiboreal-Arctic; 34–204 m.

Leaena abranchiata Malmgren, 1866.

Type locality: Eastern North Atlantic. Distribution: Widely distributed in the Arctic; southwestern Alaska; Okhotsk Sea to northern Sea of Japan; Iceland, Faroes, Norway, Sweden, Finland; Hudson Bay to Labrador; Antarctic, South Georgia Island; 9–3612 m.

Lysilla loveni Malmgren, 1866.

Type locality: Sweden. Distribution: Arctic Ocean; Chukchi Sea; Sea of Japan; North Atlantic; shallow subtidal to 339 m.

Neoamphitrite groenlandica (Malmgren, 1866).

Amphitrite groenlandica Malmgren 1866.

Type locality: Greenland. Distribution: Alaskan, Canadian, and Siberian Arctic; Unga Island, Alaska; Greenland; Spitsbergen; Novaya Zemlya; Iceland; Scandinavian coast to North Sea; Ireland; Maine; Okhotsk Sea to Sea of Japan; 13–805 m.

Neoamphitrite robusta (Johnson, 1901). Robust spaghetti-worm.

Amphitrite robusta Johnson 1901.

Type locality: Puget Sound, Washington. Distribution: Alaska to southern California; intertidal zone to 1980 m.

Neoleprea spiralis (Johnson, 1901).

Amphitrite spiralis Johnson 1901.

Type locality: Puget Sound, Washington. Distribution: Alaska to southern California; littoral zone.

Nicolea zostericola Örsted, 1844.

Terebella longicornis Sars 1829; *Terebella textrix* Dalyell 1853; *Terebella zostericola* Örsted (*fide* Grube 1860); *Nicolea simplex* Verrill 1873.

Type locality: Norway. Distribution: Arctic Ocean south to British Columbia; Russian Pacific; North Atlantic Ocean; Little Diomede Island; littoral zone.

Pista brevibranchiata Moore, 1923.

Pista fimbriata Moore 1923 (*fide* Loi 1980); *Pista fasciata*: Imajima, Hartman 1964, Banse, Hobson 1968 (non Grube); *Pista shizugawaensis* Nishi and Tanaka 2006.

Type locality: Mendocino, California. Distribution: Southern Alaska to southern California; Japan; 48–675 m in the eastern North Pacific.

Pista cristata (Müller, 1776).

Amphitrite cristata Müller 1776; *Axionice cristata* (Müller 1776); *Terebella turrita* Grube 1860; *Idalia vermiculus* Quatrefages 1866.

Type locality: Norway. Distribution: Cosmopolitan, including southern Alaska to southern California; littoral zone.

Pista flexuosa (Grube, 1860).

Terebella flexuosa Grube 1860; *Axionice flexuosa* (Grube 1860).

Type locality: Spitsbergen. Distribution: Amphiboreal-Arctic; 48–94 m.

Polycirrus medusa Grube, 1850.

Ereutho smitti Malmgren 1866.

Type locality: Mediterranean Sea. Distribution: Amphiboreal-Arctic; 47–83 m.

Proclea emmi Annenkova, 1937.

Type locality: Japan Sea. Distribution: Alaska; Japan.

Proclea graffi (Langerhans, 1884).

Leaena graffi Langerhans 1884; *Solowetia malmgreni* Ssolowiew 1899.

Type locality: Madeira. Distribution: Scattered records in the Arctic (Alaskan and Siberian Arctic, Franz Josef Land, White Sea); Puget Sound; Bering Sea to Okhotsk Sea; Iceland; Swedish west coast; Finland; Ireland; Madeira; 2–66 m.

Scionella vinogradovi (Uschakov, 1955).

Pista vinogradovi Uschakov 1955.

Type locality: Sea of Okhotsk. Distribution: Southern Alaska; western North Pacific; depth unknown.

Thelepus cincinnatus (O. Fabricius, 1780). Ringlet spaghetti-worm.

Amphitrite cincinnata Fabricius 1780; *Sabella conchilega* Montagu 1818; *Terebella madida* Frey and Leuckart 1847; *Thelepus bergmanni* Leuckart 1849; *Lumara flava* Stimpson 1854; *Terebella pustulosa* Grube 1860; *Venusia punctata* Johnston 1865; *Phenacia pulchella* Parfitt 1866; *Phenacia terebelloides* Quatrefages 1866; *Phenacia ambigrada* Claparède 1870; *Phenacia retrograda* Claparède 1870; *Thelephusa cincinnata*: Verrill 1871; *Thelepodopsis flava*: M. Sars in G.O. Sars 1872; *Heterophenacia renouardi* Marion 1883; *Thelepus cincinnatus canadensis* McIntosh 1885; *Thelepus cincinnatus andreanae* McIntosh 1922.

Type locality: Greenland. Distribution: Chukchi Sea, Alaska, to British Columbia; North Atlantic; littoral and bathyal zones.

Thelepus crispus Johnson, 1901. Curly-head spaghetti-worm.

Streblosoma magna Treadwell 1937.

Type locality: San Francisco, California. Distribution: Alaska to southern California; India; mid to low intertidal zones; common.

Thelepus hamatus Moore 1905. Hooked spaghetti-worm.

Type locality: Behm Canal, Alaska. Distribution: Southern Alaska to southern California; 84–353 m.

Thelepus setosus (Quatrefages, 1866).

Phenacia setosa Quatrefages 1866; *Neottis spectabilis* Verrill 1875; *Neottis antarctica* McIntosh 1876; *Thelepus spectabilis*: Ehlers 1897; *Thelepus haitiensis* Treadwell 1931.

Type locality: St. Vasst. Distribution: Cosmopolitan in continental shelf and slope depths.

Family Trichobranchidae

Artacamella hancocki Hartman, 1955.

Type locality: Southern California. Distribution: Southern Alaska to southern California; continental shelf and slope depths.

Terebellides irinae Gagaev, 2009.

Type locality: Arctic Canada Basin. Distribution: Arctic ?Alaska and Canada; 2570–3880 m.

Remarks: Gagaev (2009) noted that records of *T. stroemi* at depths below 1000 m are probably *T. irinae.*

Terebellides kobei Hessle, 1917.

Type locality: Kobe Bay, Japan. Distribution: Alaska; Japan; depth unknown.

Terebellides moorei Hessle, 1917.

Type locality: Alaska. Distribution: Known only from type locality; littoral zone.

Terebellides reishi Williams, 1984.

Type locality: San Miguel Island, California. Distribution: Gulf of Alaska to southern California; continental shelf depths.

Terebellides stroemi M. Sars, 1835.

Corephorus elegans Grube 1846; *Terebella pecten* Dalyell 1853; *Terebellides gracilis* Malm 1874; *Terebellides carnea* Bobretzky 1881; *Aponobranchus perrieri* Gravier 1905.

Type locality: Norway. Distribution: Cosmopolitan, including Arctic Alaska to Baja California, Mexico; littoral to bathyal zones.

Trichobranchus glacialis Malmgren, 1866.

Trichobranchus massiliensis Marion 1876.

Type locality: Spitsbergen, Arctic Ocean. Distribution: Cosmopolitan, including Alaska to Oregon; littoral zone.

Clade Sabellida

Family Oweniidae

Galathowenia oculata (Zachs, 1923).

Myriochele oculata Zachs 1923.

Type locality: White Sea, Arctic Ocean. Distribution: Circumpolar, including Alaska to Oregon; Gulf of Mexico; littoral and bathyal zones.

Myriochele heeri Malmgren, 1867.

Myriochele sarsii Hansen 1882.

Type locality: Either Spitsbergen or Greenland (Arctic Ocean). Distribution: Amphiboreal-Arctic; 47–3010 m.

Owenia fusiformis delle Chiaje, 1844.

Ammochares ottonis Grube 1846; *Ammochares assimilis* Sars 1851; *Ops digitata* Carrington 1865; *Ammochares tegula* Kinberg 1866; *Ammochares sundevalli* Kinberg 1867; *Owenia filiformis* Claparède 1870; *Owenia brachycera* Marion 1876; *Ammochares orientalis* Grube 1878; *Ammochares brasiliensis* Hansen 1882; *Ammochares tenuis* Haswell 1883; *Ammochares aedificator* Andrews 1891; *Ammochares occidentale* Johnson 1901.

Type locality: Mediterranean Sea. Distribution: Cosmopolitan; littoral to bathyal zones.

Family Sabellariidae

Idanthyrsus saxicavus (Baird, 1863). Stone-cave sandmason tubeworm.

Sabellaria saxicava Baird 1863; *Idanthyrsus armatus* Kinberg 1867; *Idanthyrsus ornamentatus* Chamberlin 1919.

Type locality: Esquimalt Harbour, Vancouver Island. Distribution: Eastern Bering Sea to Mexico; Japan; Siberia; intertidal zone to 150 m.

Neosabellaria cementarium (Moore, 1906). Cemented sandmason tubeworm.

Sabellaria cementarium Moore 1906.

Type locality: Admiralty Inlet, Port Townsend, Washington. Distribution: Northern Alaska to southern California; intertidal zone to 80 m.

Family Sabellidae

Amphiglena pacifica Annenkova, 1934.

Type locality: Bering Strait. Distribution: Bering Sea and Bering Strait; depth unknown.

Bispira crassicornis (M. Sars, 1851).

Sabella crassicornis Sars 1851; *Sabella picta* Krøyer 1856.

Type locality: Norway. Distribution: Alaska to southern California; North Atlantic; continental shelf and slope depths.

Bispira elegans (Bush, 1905).

Sabella elegans Bush 1905 (non *Sabella elegans*: Moore 1909); *Sabella formosa* Bush 1905; *Sabella humilis* Bush 1905; *Sabella leptalea* Bush 1905; *Sabella crassicornis*: Hartman 1942 (Alaska), Pettibone 1954 (part from Alaska (non-Arctic), Alaskan Peninsula and Bering Island, Kamchatka, Russia).

Type locality: Kodiak, Alaska. Distribution: Southern Alaska to British Columbia; littoral zone.

Branchiomma infarctum (Krøyer, 1856).

Sabella infarcta Krøyer 1856; *Dasychone infarcta* (Krøyer 1856); *Dasychone decora* Sars 1862.

Type locality: Greenland, Arctic Ocean. Distribution: Amphiboreal-Arctic, including Arctic Alaska (Beaufort Sea); >400 m depth.

Chone cincta Zachs, 1933.

Type locality: Northern Sea of Japan. Distribution: Southern Alaska; Japan; Arctic Ocean; known from rocky shores.

Chone duneri Malmgren, 1867.

Chone longocirrata M. Sars in G.O. Sars 1872; *Chone bimaculata* Banse and Nichols 1968.

Type locality: Norway. Distribution: Arctic Alaska to Washington; North Atlantic; Gulf of Mexico; littoral zone.

Chone gracilis Moore, 1906.

Type locality: Alitak Bay, Kodiak Island, Alaska. Distribution: Alaska to Oregon; 64–344 m.

Chone infundibuliformis Krøyer, 1856.

Sabella rubripunctata Grube 1846; *Chone suspecta* Krøyer 1856; *Chone kroeyeri* Sars 1862; *Chone teres* Bush 1905; *Chone fauveli* McIntosh 1916; *Chone ungavana* Chamberlin 1920.

Type locality: Greenland. Distribution: Arctic Alaska to southern California; North Atlantic; littoral zone.

Chone minuta Hartman, 1944. Minute feather-duster.

Type locality: Dillon Beach, California. Distribution: Alaska to southern California; intertidal to shallow subtidal zones.

Chone mollis (Bush in Moore, 1904).

Metachone mollis Bush 1904.

Type locality: Pacific Grove, California. Distribution: Gulf of Alaska to California; depth unknown.

Chone murmanica Lukasch, 1910.

Type locality: Kola Fjord, Arctic Ocean. Distribution: Arctic Ocean, including Arctic Alaska in the Beaufort Sea; 20–991 m.

Euchone analis (Kröyer, 1865).

Sabella analis Kröyer 1865; *Euchone rubella* Ehlers 1871.

Type locality: Spitsbergen, Arctic Ocean. Distribution: Arctic Alaska to California; western North Pacific; North Atlantic; littoral zone.

Euchone incolor Hartman, 1965.

Euchone trisegmentata Reish 1965; *Euchone barnardi* Reish 1968.

Type locality: Off New England. Distribution: Bering Sea to Baja California, Mexico; western North Atlantic; Gulf of Mexico; continental shelf depths.

Euchone papillosa (M. Sars, 1851).

Sabella papillosa Sars 1851; *Chone flabellifera* Krøyer 1856; *Sabella tenuissima* Krøyer 1856.

Type locality: Norway. Distribution: Amphiboreal-Arctic; 27–464 m.

Eudistylia polymorpha (Johnson, 1901). Polymorph feather-duster.

Bispira polymorpha Johnson 1901; *Eudistylia intermedia* Bush 1905; *Distylia monterea* Chamberlin 1919.

Type locality: Pacific Grove, California. Distribution: Alaska to southern California; intertidal zone to 450 m.

Eudistylia vancouveri (Kinberg, 1867). Vancouver feather-duster.

Sabella vancouveri Kinberg 1867; *Eudistylia abbreviata* Bush 1905; *Eudistylia gigantea* Bush 1905; *Eudistylia plumosa* Bush 1905; *Sabella columbiana* Cameron 1915.

Type locality: Vancouver Island, Canada. Distribution: Alaska to central California; intertidal zone to 30 m.

Laonome kroyeri Malmgren, 1866.

Type locality: Spitsbergen (Arctic Ocean). Distribution: Arctic Alaska; North Atlantic; Mediterranean Sea; depth unknown.

Megalomma splendida (Moore, 1905).

Pseudopotamilla splendida Moore 1905; *Pseudopotamilla anoculata* Moore 1905; *Branchiomma disparoculatum* Treadwell 1914; *Pseudopotamilla parva* Chamberlin 1919; *Megalomma parva* (Chamberlin 1919); *Branchiomma burrardum* Berkeley 1930.

Type locality: Alaska. Distribution: Alaska to Baja California, Mexico; continental shelf and slope depths.

Myxicola aesthetica (Claparède, 1870). Petite slime-tube feather-duster.

Leptochone aesthetica Claparède 1870; *Myxicola dinardensis* Saint-Joseph 1894; *Myxicola glacialis* Bush 1905.

Type locality: Gulf of Naples, Italy. Distribution: Alaska to California; North Atlantic; littoral zone.

Myxicola infundibulum (Renier, 1804). Slime-tube feather-duster.

Terebella infundibulum Renier 1804; *Sabella gelatinosa* Renier 1804; *Terebella buccinea* Renier 1804; *Amphitrite infundibulum* Montagu 1808; *Sabella villosa* Cuvier 1830; *Myxicola villosa* Koch in Renier 1847; *Eriographis borealis* Grube 1850; *Leiobranchus modestus* Quatrefages 1850; *Amphitrite floscula* Dalyell 1853; *Myxicola grubii* Krøyer 1856; *Myxicola sarsii* Krøyer 1856; *Myxicola steenstrupi* Krøyer 1856; *Myxicola modesta* Quatrefages 1866; *Myxicola parasites* Quatrefages 1866; *Sabella viridis* McIntosh 1874; *Myxicola platychaeta* Marenzeller 1884; *Myxicola pacifica* Johnson 1901; *Myxicola conjuncta* Bush 1905; *Myxicola affinis* Bush 1905; *Myxicola michaelseni* Augener 1918; *Myxicola monacis* Chamberlin 1919; *Myxicola viridis* McIntosh 1923; *Tuba divisa* Renier in McIntosh 1923.

Type locality: Mediterranean Sea. Distribution: Cosmopolitan, including Arctic Alaska to California; continental shelf depths.

Oriopsis crenicollis (Annenkova, 1934).

Oridia crenicollis Annenkova 1934.

Type locality: Bering Strait. Distribution: Known only from type locality; depth unknown.

Paradialychone ecaudata (Moore, 1923).

Jasmineira ecaudata Moore 1923; *Chone ecaudata* (Moore 1923).

Type locality: Santa Cruz Island, southern California. Distribution: Alaska to southern California; Japan; littoral zone.

Parasabella media Bush, 1905. Parasol feather-duster.

Parasabella maculata Bush 1905; *Sabella media* (Bush 1905); *Demonax medius* (Bush 1905).

Type locality: Kodiak, Alaska. Distribution: Kodiak, Alaska, to southern California; Japan; intertidal and subtidal zones.

Potamilla neglecta (M. Sars, 1851).

Sabella neglecta Sars 1851; *Sabella breviberbis* Langerhans 1881; *Potamilla acuminata* Moore and Bush 1904; *Aspeira modesta* Bush 1905.

Type locality: Norway. Distribution: Chukchi and Beaufort seas, Alaska, to southern California; eastern North Atlantic; littoral zone.

Potamilla symbiotica Uschakov, 1950.

Type locality: Sea of Okhotsk. Distribution: Alaska; western North Pacific; littoral zone.

Pseudopotamilla intermedia Moore, 1905.

Pseudopotamilla macrops Chamberlin 1919.

Type locality: Sitka Sound, Alaska. Distribution: Alaska to Mexico; Arctic Ocean; western North Pacific; North Atlantic; continental shelf and slope depths.

Pseudopotamilla occelata Moore, 1905.

Type locality: Afognak Island, Alaska. Distribution: Alaska to central California; intertidal to slope depths.

Pseudopotamilla reniformis (Linnaeus, 1788).

Amphitrite reniformis Linnaeus 1788; *Potamilla reniformis* (O. F. Müller 1771); *Sabella reniformis*: Leuckart 1849; *Sabella aspera* Krøyer 1856; *Sabella oculata* Krøyer 1856; *Potamilla obscura* Iroso 1921; *Potamilla troncatula* Iroso 1921.

Type locality: Europe. Distribution: Amphiboreal-Arctic; known from seamounts and knolls.

Schizobranchia dubia Bush, 1905.

Type locality: Orca, Prince William Sound, Alaska. Distribution: Southern Alaska; intertidal and shallow subtidal zones.

Schizobranchia insignis Bush, 1905. Split-branch feather-duster.

Schizobranchia concinna Bush 1905; *Schizobranchia nobilis* Bush 1905.

Type locality: Yakutat, Alaska. Distribution: Alaska to central California; intertidal zone to 46 m.

Family Serpulidae

?*Apomatus geniculata* (Moore and Bush, 1904).
Protula geniculata Moore and Bush 1904; *Apomatopsis geniculata* (Moore and Bush 1904); *Apomatus timsii* Pixell 1912.
Type locality: Suruga Bay, Japan. Distribution: ?Southern Alaska to British Columbia; Japan; 37–137 m.

Bushiella (Jugaria) granulata (Linnaeus, 1767).
Serpula granulata Linnaeus 1767; *Spirorbis granulata* (Linnaeus 1767).
Type locality: Greenland. Distribution: Amphiboreal-Arctic; 23–137 m.

?*Circeis armoricana* Saint-Joseph, 1894.
Type locality: Dinard, Brittany, France. Distribution: ?Southern Alaska to Baja California, Mexico; Japan; North Atlantic; littoral zone.
Remarks: Some polychaete specialists consider *Circeis armoricana* a junior synonym of *C. spirillum* (Linnaeus 1758).

Circeis spirillum (Linnaeus, 1758).
Spirorbis spirillum Linnaeus 1758; *Dexiospira spirillum* (Linnaeus 1758); *Serpula lucida* Montagu 1803; *Spirillum pellucidum* Oken 1815.
Type locality: Europe. Distribution: Cosmopolitan, including Alaska and Aleutian Islands to southern California; littoral zone.

Crucigera irregularis Bush, 1905. Irregular calcareous tubeworm.
Type locality: Juneau, Alaska. Distribution: Alaska to central California; intertidal zone to 146 m.

Crucigera zygophora (Johnson, 1901). Yoke-bearer calcareous tubeworm.
Serpula zygophora Johnson 1901; *Crucigera formosa* Bush 1905; *Crucigera hespera* Chamberlin 1919.
Type locality: Puget Sound, Washington. Distribution: Alaska to central California; intertidal zone to 146 m.

Hyalopomatus biformis (Hartman, 1960).
Vermiliopsis biformis Hartman 1960.
Type locality: Santa Catalina Basin, California. Distribution: Alaska to California; 38–1280 m.
Remarks: Usually found on the shells of the brachiopod *Laqueus*.

Hyalopomatus claparedii Marenzeller, 1878.
Type locality: South of Franz Josef Land, Russia. Distribution: Arctic Basin, including north coast of Alaska; Kara Sea; southern Franz Josef Land; northern Ellesmere Land; between Hebrides and Iceland; 230–3622 m.

Janua (Dexiospira) semidentata (Bush, 1905).
Spirorbis semidentatus Bush 1905.
Type locality: Dutch Harbor, Unalaska Island, Aleutian Islands. Distribution: Aleutian Islands; Prince William Sound; Sitka, Alaska; depth unknown.

Laeospira asperata (Bush, 1905).
Spirorbis asperatus Bush 1905.
Type locality: Sitka, Alaska. Distribution: Known only from type locality; depth unknown.

Laeospira moerchi (Levinsen, 1883).
Spirorbis moerchi Levinsen 1883.
Type locality: Greenland. Distribution: Prince William Sound; Sitka, Alaska; Queen Charlotte Island, British Columbia; depth unknown.

Leodora abnormis (Bush, 1905).
Spirorbis abnormis Bush 1905.
Type locality: Sitka, Alaska. Distribution: Bering Sea to northern California; littoral zone.

Paradexiospira violacea (Levinsen, 1883).
Spirorbis violacea Levinsen 1883.
Type locality: Europe. Distribution: Southern Alaska to British Columbia; North Atlantic; littoral zone.

Paradexiospira vitrea (O. Fabricius, 1780).
Spirorbis vitreus Fabricius 1780; *Laeospira vitrea* (Fabricius 1780); *Eulaeospira vitrea* (Fabricius 1780); *Spirorbis variabilis* Bush 1905; *Spirorbis semidentatus* Bush 1905.
Type locality: Greenland. Distribution: Cosmopolitan, including Alaska to central California; littoral zone.

Pileolaria quadrangularis (Stimpson, 1853).
Spirorbis quadrangularis Stimpson 1853.
Type locality: Bay of Fundy. Distribution: Prince William Sound and Bay of Fundy; depths to 20 m.

Protolaeospira ambilateralis Pixell, 1912.
Spirorbis (Protolaeospira) ambilateralis Pixell 1912.
Type locality: Dodd Narrows, British Columbia. Distribution: ?Southeast Alaska to British Columbia; 27–46 m.

Protula pacifica Pixell, 1912.
Type locality: Fairway Channel, outside Departure Bay, Nanaimo, British Columbia. Distribution: Kuril Islands to Alaska, Canada, and Washington; 27–69 m.

Pseudochitinopoma occidentalis (Bush, 1905). Western calcareous tubeworm.
Hyalopomatopsis occidentalis Bush 1905; *Chitinopoma occidentalis* (Bush 1905).
Type locality: Prince William Sound, Alaska. Distribution: Southern Alaska to southern California; Arctic Ocean; intertidal zone to 128 m.

Salmacina tribranchiata (Moore, 1923).
Filograna tribranchiata Moore 1923.
Type locality: Santa Rosa Island, California. Distribution: Alaska to California; Hawaii and Mexican Pacific; intertidal zone to 2 m.

Serpula columbiana Johnson, 1901. Red-trumpet calcareous tubeworm.

Serpula splendens Bush 1905; *Serpula nannoides* Chamberlin 1919.

Type locality: Puget Sound, Washington. Distribution: Alaska to California; intertidal zone to more than 100 m.

?***Serpula vermicularis*** Linnaeus, 1767.

Serpula echinata Gmelin 1791; *Serpula fascicularis* Lamarck 1818; *Serpula rugosa* Turton 1819; *Serpula cristata* Sowerby and Sowerby 1820–25; *Vermilia vermicularis*: Fleming 1825; *Serpula aspera* Philippi 1844; *Serpula pallida* Philippi 1844; *Serpula venusta* Philippi 1844; *Serpula philippii* Mörch 1863; *Serpula gervaisii* Quatrefages 1866; *Serpula interrupta* Quatrefages 1866; *Serpula montagui* Quatrefages 1866; *Serpula crater* Claparède 1870; ?*Serpula splendens* Bush 1905.

Type locality: Western Europe. Distribution: ?Alaska to Baja California, Mexico; ?western North Pacific; North Atlantic; littoral zone.

Remarks: Until recently, much of the available literature accepted *Serpula vermicularis* as the only species of *Serpula* in the eastern North Pacific. However, investigations indicate that *S. vermicularis* is likely restricted to the North Atlantic (ten Hove and Kupriyanova, 2009).

Spirorbis granulatus (Linnaeus, 1767).

Serpula granulata Linnaeus 1767; *Spirorbis quadrangularis* Stimpson 1854.

Type locality: Northern oceans. Distribution: Widely distributed in the Arctic, including Alaskan and Siberian Arctic; Greenland; Jan Mayen; Spitsbergen; Franz Josef Land; Novaya Zemlya; Kara Sea; Iceland; Faroes; Norway to France; Hudson Bay to North Carolina; Alaska to British Columbia; Sea of Japan; intertidal zone to 437 m.

Spirorbis incongruus Bush, 1905.

Type locality: Prince William Sound, Alaska. Distribution: Known only from Prince William Sound, at the type locality and Virgin Bay; depth unknown.

Spirorbis lineatus Bush, 1905.

Type locality: Sitka, Alaska. Distribution: Known from Sitka and Prince William Sound; depth unknown.

Spirorbis medius Pixell, 1912.

Sinistrella media (Pixell 1912).

Type locality: Departure Bay, Nanaimo, British Columbia. Distribution: Southern Alaska to central California; littoral zone.

Spirorbis rugatus Bush, 1905.

Dexiospira rugatus (Bush 1905); *Janua rugata* (Bush 1905).

Type locality: Sitka, Alaska. Distribution: Alaska to central California; littoral zone.

Spirorbis similis Bush, 1905.

Pileolaria similis (Bush 1905).

Type locality: Prince William Sound, Alaska. Distribution: Southern Alaska to central California; littoral zone.

Spirorbis spirillum (Linnaeus, 1758).

Serpula spirillum Linnaeus 1758; *Serpula sinistrorsa* Montagu 1803.

Type locality: Unknown. Distribution: Arctic Alaska to southern California; western North Atlantic from Greenland to Cape Cod; depth unknown.

Spirorbis variabilis Bush, 1905.

Type locality: Sitka, Alaska. Distribution: Known only from type locality; depth unknown.

Family Siboglinidae (beard worms)

Polybrachia annulata Ivanov, 1952.

Type locality: Sea of Okhotsk. Distribution: Bering Sea; southern Alaska; deep water, 1440–5000 m.

Polybrachia canadensis (Ivanov, 1962).

Heptabrachia canadensis Ivanov 1962.

Type locality: Queen Charlotte Island, British Columbia. Distribution: Southern Alaska to British Columbia; deep water, 2500–2600 m.

Siboglinum fedotovi Ivanov, 1957.

Siboglinum vancouverensis Southward 1969.

Type locality: Southwestern part of the Bering Sea. Distribution: Bering Sea; southern Alaska to British Columbia; deep water, type material collected at 2995–3875 m.

Class Clitellata

Subclass Hirudinea—The Leeches

There are about 700 species of hirudineans (leeches) known worldwide, of which some 100 are marine, 90 terrestrial, and the remainder freshwater (Sket and Trontelj, 2008). Approximately six species occur in Alaskan marine waters (Table 1). A key to identify Arctic species can be found in Buzhinskaja (2011).

Order Rhynchobdellida

Family Piscicolidae

Crangonobdella fabricii (Malm, 1863).

Platybdella fabricii Malm 1863; *Crangonobdella murmanica* (Selensky 1914); *Crangonobdella achmerovi* (Borovitzkaia 1949).

Type locality: Scandinavia. Distribution: Boreal Arctic; Point Barrow, Alaska; Bering Strait; Bering Sea; Sea of Okhotsk; northern Sea of Japan; Greenland; Barents and Kara seas; depth unknown.

Remarks: Parasitic on the shrimp *Sclerocrangon boreas* and sculpins (*Myoxocephalus* spp.).

Heptacyclus brunneus (Johansson, 1896).

Abranchus brunnea Johansson 1896; *Malmiana brunnea* (Johansson 1896); *Janusion brunnea* (Johansson 1896).

Type locality: Södra Bohuslän, Sweden. Distribution: High boreal Arctic; New Hampshire; Bay of Fundy; Newfoundland; Greenland; North, Barents and White seas; eastern Kamchatka; Aleutian Islands; depth unknown.

Remarks: Parasitic on sculpins (*Myoxocephalus* spp.).

Heptacyclus scorpii (Malm, 1863).

Platybdella scorpii Malm 1863; *Janusion scorpii* (Malm 1863); *Malmiana scorpii* (Malm 1863); *Ottoniobdella scorpii* (Malm 1863).

Type locality: Scandinavia. Distribution: ?Southeast Alaska; Arctic Ocean; North Atlantic; depth unknown.

Remarks: Parasitic on sculpins (*Myoxocephalus* spp.).

Heptacyclus virgatus (Oka, 1910).

Ichthyobdella virgata Oka 1910.

Type locality: Sea of Japan. Distribution: Pacific widespread boreal; Chukchi Sea; Bering Strait to Kodiak Island, Alaska; western North Pacific; depth unknown.

Remarks: Parasitic on sculpins (*Myoxocephalus* spp.).

Levinsenia rectangulata (Levinsen, 1882).

Pisciola rectangulata Levinsen 1882.

Type locality: Not traced. Distribution: Bering Sea to British Columbia; western North Pacific; depth unknown.

Remarks: Parasitic on cod (Gadidae).

Notostomum cyclostomum Johansson, 1898. Striped sea-leech.

Notostomobdella cyclostoma (Johansson 1898); *Carcinobdella cyclostoma* (Johansson 1898).

Type locality: Northwestern Bering Sea (61°45′N, 180°W). Distribution: Arctic Ocean; northern Alaska to southern Alaska; Japan; subtidal zone to 366 m; common.

Remarks: Parasite of king and tanner crabs, skates and rays (Rajidae), sharks (Selachimorpha), and flatfishes (Pleuronectiformes).

Phylum Echiura—The Spoon Worms

The echiurans (spoon worms) are a small group of unsegmented, coelomate worms, with about 230 species known worldwide (Zhang, 2011). Approximately 13 species occur in Alaskan waters (Table 1). Molecular data places echiurans within the Annelida (Struck et al., 2007) but they continue to be treated as a separate phylum because of their lack of segmentation and unique morphology. Many genera, such as *Echiurus,* live in burrows in sand and mud and most species use their proboscis to suspension feed. A key to identify Arctic species can be found in Buzhinskaja (2011). Several sources of secondary literature were used to compile the information for the list of echiurans: Zenkevitch (1957, 1958), Fisher (1946, 1948), Stephens and Edmonds (1972), and Biseswar (2012).

Order Echiuroinea

Family Bonelliidae

Alomasoma belyaevi Zenkevitch, 1964.

Type locality: 44°53.8′N, 12832.1′W. Distribution: Gulf of Alaska; western North Pacific; Gulf of Panama; South America; Antarctica; deep water, type material collected at 2826–2843 m.

Alomasoma chaetiferum Zenkevitch, 1958.

Type locality: Aleutian Trench. Distribution: Known only from the Aleutian Trench; type material collected at 7268 m.

Bonelliopsis alaskana Fisher, 1946.

Type locality: Dutch Harbor, Alaska. Distribution: Gulf of Alaska; littoral zone.

Hamingia arctica Danielssen and Koren, 1881.

Hamingia glacialis Horst 1881.

Type locality: Norwegian coast. Distribution: Point Barrow, Alaska; Chukchi Sea; Laptev Sea; East Greenland; Iceland; Barents Sea; Murman coast; Antarctic, South Shetland Islands; 65–8035 m.

Prometor gracilis (Zenkevitch, 1957).

Tatjanella gracilis Zenkevitch 1957.

Type locality: Kamchatka Sound. Distribution: Bering Sea and Aleutian Basin; Kamchatka Sound; deep water, type material was collected at 4820 m.

Prometor grandis (Zenkevitch, 1957).

Tatjanella gracilis Zenkevitch 1957.

Type locality: Kamchatka Sound. Distribution: Gulf of Alaska; western North Pacific; deep water, type material collected at 4820 m.

Protobonellia mitsukurii Ikeda, 1908.

Type locality: Sagami Bay, Japan. Distribution: Gulf of Alaska; western North Pacific; type material collected at 554 m.

Pseudoikedella achaeta (Zenkevitch, 1958).

Bonellia achaeta Zenkevitch 1958; *Ikedella achaeta* (Zenkevitch 1958).

Type locality: Southern part of the Sea of Okhotsk. Distribution: Gulf of Alaska; western North Pacific; South America; deep water.

Vitjazema aleutica Zenkevitch, 1958.

Type locality: Aleutian Trench. Distribution: Known only from type locality; 7286 m.

Family Echiuridae

Anelassorhynchus indivisus (Sluiter, 1900).

Thalasssema indivisum Sluiter 1900; *Arhynchite indivisus* (Sluiter 1900).

Type locality: Spain. Distribution: Gulf of Alaska; eastern North Atlantic; type material collected at 90 m.

Echiurus echiurus alaskanus Fisher, 1948.

Echiurus pallasii: Wilson 1900.

Type locality: Auke Bay, Juneau, Alaska. Distribution: Point Barrow, Alaska to Juneau, Alaska; sublittoral zone.

Echiurus echiurus echiurus (Pallas, 1767).

Lumbricus echiurus Pallas 1767; *Holothuria forcipata* Fabricius 1780; *Thalassema vulgaris* Savigny 1809; *Echiurus pallasi* Guerin-Meneville 1831; *Echiurus vulgaris*: Forbes 1841; *Echiurus chrysanthophorus* Pourtales 1851; *Bonellia fabricii* Diesing 1859; *Echiurus lutkenii* Diesing 1859.

Type locality: Not specified. Distribution: Alaska; Chukchi Sea; Barents Sea; Sea of Okhotsk; Japan; western North Atlantic; Greenland; Gulf of Kola; Iceland; North Sea and Scandinavian coasts; sublittoral zone; common.

Echiurus sitchaensis (Brandt, 1835).

Thalassema sitchaensis Brandt 1835.

Type locality: Sitka Island, Alaska. Distribution: Southeast Alaska to British Columbia; depth unknown.

Remarks: This species is very similar to *E. echiurus* and there is still some doubt about the validity of the species (Stephens and Edmonds, 1972).

Phylum Sipuncula—The Peanut Worms

About 320 species of sipunculans (peanut worms) are known worldwide (University of California Museum of Paleontology: http://www.ucmp.berkeley.edu/sipuncula/sipuncula.html). Approximately 13 species occur in Alaskan waters (Table 1), most of them living in deep water. Molecular data places sipunculans within the Annelida (Struck et al., 2007) but they continue to be treated as a separate phylum because of their lack of segmentation and unique morphology. The higher classification follows Kawauchi et al. (2012). A key to identify Arctic species can be found in Buzhinskaja (2011). Several sources of secondary literature were used to compile the information for the list of sipunculans: Murina (1964, 1973), Stephens and Edmonds (1972), and Cutler (1994).

Family Golfingiidae

Golfingia birsteini Murina, 1973.

Type locality: Peruvian-Chilean Trench. Distribution: Southeast Alaska; deep water, type material collected at 3200 m.

Golfingia margaritacea margaritacea (Sars, 1851).

Sipunculus margaritaceus Sars 1851; *Phascolosoma (Sipunculus) margaritaceum* (Sars 1851); *Golfingia margaritacea californiensis* Fisher 1852; *Homalosoma laeve* Oersted, in Keferstein 1865; *Sipunculus (Phascolosomum) oerstedii* de Quatrefages 1865; *Phascolosoma capsiforme* Baird 1868; *Phascolosoma albidum* Theel 1875; *Phascolosoma fulgens* Theel 1875; *Stephanostoma hansenii* Danielssen and Koren 1880; *Stephanostoma barentsii* Horst 1881; *Phascolosoma pudicum* Selenka 1885; *Phascolosoma antarcticum* Michaelsen 1889; *Phascolosoma fuscum* Michaelsen 1889; *Phascolosoma georgianum* Michaelsen 1889; *Phascolosoma okinoseanum* Ikeda 1904; *Phascolosoma japonicum* Ikeda 1904; *Phascolosoma margaritaceum finmarchica* Theel 1905; *Phascolosoma margaritaceum sibirica* Theel 1905; *Phascolosoma margaritaceum trybomi* Theel 1905; *Phascolosoma socium* Lanchester 1908; *Phascolosoma nordenskjoldi* Theel 1911; *Phascolosoma ohlini* Theel 1911; *Phascolosoma margaritaceum* var. *meridionalis* Gerould 1913; *Phascolosoma mawsoni* Benham 1922; *Phascolosoma glossipapillosum* Sato 1934; *Phascolosoma noto* Sato 1934; *Phascolosoma signum* Sato 1934; *Phascolosoma soyo* Sato 1934; *Golfingia ikedai* Fisher 1950; *Golfinia margaritacea californiensis* Fisher 1952; *Golfingia margaritacea adelaidensis* Edmonds 1956; *Gofingia cantabriensis* Edmonds 1960.

Type locality: Norway. Distribution: Widely distributed in all oceans except the tropics, including the Chukchi Sea and Bering Strait to California in the eastern North Pacific; 1–5300 m, but most common at depths less than 300 m.

Golfingia vulgaris (de Blainville, 1827). Brown peanut worm.

Sipunculus vulgaris de Blainville 1827; *Phascolosoma vulgare* (de Blainville 1827); *Phascolosoma longicolle* Rüppell and Leuckart 1828; *Phascolosoma papillosum* Thompson 1840; *Syrinx harveyii* Forbes 1841; *Sipunculus punctissimus* Grosse 1853; *Phascolosoma harveyii*: Diesing 1859; *Phascolosoma commune* Keferstein 1863; *Phascolosoma vulgare*: Keferstein 1863; *Sipunculus obscurus* Quatrefages 1865; *Phascolosoma margaritaceum*: Keferstein 1865; *Phascolosoma dubium* Theel 1875; *Phascolosoma luteum* Theel 1875; *Phascolosoma validum* Theel 1875; *Golfingia mackintoshii* Lankester 1885; *Phascolosoma sanderi* Collin 1892.

Type locality: Dieppe, France. Distribution: Widely distributed: Southern Alaska to Washington; Japan; Greenland; Norwegian Coast, Kattegat and Skagerrak; North Sea; English Channel; Eire; France; Cape Verde Islands; West Africa; Morocco; Israel; Egypt; Red Sea; Zanzibar; Malaya, Singapore; 5–2000 m, most common at depths less than 500 m.

Golfingia wodjanizkii Murina, 1973.

Golfingia nicolasi Thompson 1980.

Type locality: Peruvian-Chilean Trench. Distribution: Southeast Alaska; Sea of Okhotsk; southern California; deep water, 1000–2400 m.

Nephalosoma capilleforme (Murina, 1973).

Golfingia glacialis Murina 1964; *Golfingia (Phascoloides) capilleformis* Murina 1973.

Type locality: Peruvian-Chilean Trench. Distribution: Southeast Alaska; deep water, bathyal to abyssal, 900–5800 m.

Nephasoma abyssorum abyssorum (Koren and Danielssen, 1875).

Phascolosoma abyssorum Koren and Danielssen 1875; *Golfingia abyssorum* (Koren and Danielssen 1875); *Nephasoma abyssorum abyssorum* (Koren and Danielssen 1875); *Phascolosoma incompositum* Sluiter 1912; *Golfinga incomposita* (Sluiter 1912); *Nephasoma incompositum* (Sluiter 1912).

Type locality: Eastern North Atlantic. Distribution: Boreal Arctic; Central Arctic Basin and all marginal seas except the East Siberian Sea; bathyal and abyssal depths (500–5300 m).

Nephasoma lilljeborgi (Danielssen and Koren, 1880).

Phascolosoma lilljeborgii Danielssen and Koren 1880; *Golfingia lilljeborgii* (Danielssen and Koren 1880); *Onchnesoma glaciale* Danielssen and Koren 1880; *Phascolosoma glaciale* (Danielssen and Koren 1880); *Golfingia glacialis* (Danielssen and Koren 1880); *Nephasoma marinki* Pergament 1940.

Type locality: Far northeastern Atlantic Ocean. Distribution: Boreal Arctic; all marginal seas of the Arctic Ocean and the central Arctic Basin; Baffin Bay; eurybathic, predominantly in the sublittoral and bathyal zones.

Remarks: In the Chukchi Sea it is found in tubes of polychaetes of the genus *Spiochaetopterus*.

Nephasoma minutum (Keferstein, 1862).

Phascolosoma minutum Keferstein 1862; *Petalosoma minutum* (Keferstein 1862); *Golfingia minuta* (Keferstein 1862); *Nephasoma glacialis* (Koren and Danielssen 1881); *Phascolosoma sabellariae* Théel 1905; *Phascolosoma improvisum* Théel 1905; *Golfingia improvisa* (Théel 1905); *Phascolosoma anceps* Théel 1905.

Type locality: Eastern North Atlantic. Distribution: Panoceanic; central Arctic Basin and all seas of the Arctic except the East Siberian Sea; eurybathic.

Phascolion lutense Selenka, 1885.

Phascolion canum Cutler and Cutler 1980.

Type locality: South Pacific. Distribution: Bering Sea, Aleutian, Kuril-Kamchatka, and Japanese trenches; South Pacific; 1800–7340 m, most common at depths greater than 2500 m.

Phascolion strombus (Montagu, 1804).

Sipunculus strombus Montagu 1804; *Sipunculus dentalii* Gray 1828; *Sipunculus bernhardus* Forbes 1841; *Sipunculus capitatus* Rathke 1843; *Sipunculus concharum* Oersted 1844; *Sipunculus caementarius* de Quatrefages 1865; *Phascolosoma hamulatum* Packard 1867; *Phascolion tubiculum* Stephen and Edmonds 1972; *Phascolosoma tubicola* Verrill 1873; *Phascolion spetsbergense* Théel 1875; *Phascolion alberti* Sluiter 1900; *Phascolion artificiosus* Ikeda 1904; *Phascolion mogadrense* Sluiter 1912; *Phascolosoma intermedium* Southern 1913; *Phascolion africanum* W. Fischer 1923; *Phascolion brotzkajae* Murina 1964; *Phascolion tortum* Edmonds 1976; *Phascolion anomalus* Murina 1981.

Type locality: Devonshire. Distribution: Panoceanic; Arctic circumpolar, in all Arctic seas and in central Arctic Basin; 1–4030 m, most common at 200–2000 m.

Thysanocardia nigra (Ikeda, 1904).

Phascolosoma prioki Sluiter 1881; *Phascolosoma nigrum* Ikeda 1904; *Golfingia nigra* (Ikeda 1904); *Phascolosoma pavlenkoi* Ostroumov 1909; *Phascolosoma zenibakense* Ikeda 1924; *Phascolosoma hyugensis* Sato 1934; *Phascolosoma hozawai* Sato 1937; *Phascolosoma onagawa* Sato 1937; *Golfingia macginitiei* Fisher 1952; *Golfingia pugettensis* Fisher 1952.

Type locality: Japan. Distribution: Southern Alaska to southern California; Japan; Philippines; Indonesia; Singapore; 1–120 m.

Family Phascolosomatidae

Apionsoma misakianum (Ikeda, 1904).

Phascolosoma misakianum Ikeda 1904; *Golfingia misakiana* (Ikeda 1904); *Phascolosoma hespera* Chamberlin 1920; *Golfingia hespera* (Chamberlin 1920); *Golfingia longirostris* Wesenberg-Lund 1959; *Golfingia tenuissima* Wesenberg-Lund 1959.

Type locality: Tokyo Bay, Japan. Distribution: Aleutian Islands to California; Japan; Mediterranean; St. Helena; western Australia; East Africa; western India; Madagascar; intertidal zone to continental shelf depths; uncommon.

Phascolosoma agassizii Keferstein, 1866. Agassiz's peanut worm.

Phymosoma agassizii (Keferstein 1866); *Phymosoma lordi* Baird 1868; *Phascolosoma japonicum* Grube 1877; *Physcosoma yezoense* Ikeda 1924; *Physcosoma glaucum* Sato 1930; *Physcosoma formosense* Sato 1939; *Phascolosoma (Rueppellisoma) golikovi* Murina 1975.

Type locality: Mendocino, California. Distribution: Northern Alaska to Baja California, Mexico; Japan; Atlantic Ocean; Indian Ocean; Gulf of Manaar; Maldives and Laccadives; Siam; Loyalty Islands; ?Australia; intertidal zone to 200 m.

Phylum Mollusca

Class Aplacophora—The Aplacophora

The aplacophorans are worm-like mollusks that live primarily at depths greater than 200 m. They are traditionally considered ancestral to the other mollusk classes and currently there are about 320 described species worldwide. Approximately 11 species occur in Alaskan waters (Table 1). Several sources of primary and secondary literature were used to compile the information for the list of aplacophorans: Heath (1911), Scheltema (1985), and Ivanov (1986, 1996a,b).

Subclass Neomeniomorpha

Famly Dondersiidae

Nematomenia platypoda (Heath, 1911).
Herpomenia platypoda Heath 1911.
Type locality: Alaska, Aleutian Islands, near Agattu Island. Distribution: Known only from type locality; 881 m; rare.

Family Neomeniidae

?***Neomenia yamamotoi*** Baba, 1975. Giant solenogaster.
Type locality: Cape Chikyu-misaki of Muroran, Hokkaido, Japan. Distribution: Western North Pacific, near Honshu Island, Japan, along the Kuril Islands, in the Okhotsk Sea, and along the Commander Islands; 145–1500 m; uncommon.

Remarks: Ivanov (1996b:172) found new records of this species in the western North Pacific and stated, "Presently, it is unknown whether the distribution area includes the Bering Sea and the Aleutian Islands." A species of *Neomenia* was collected from the Aleutian Islands and the Gulf of Alaska during NOAA/NMFS benthic trawl surveys (NMFS, AFSC, RACE survey database, 2012), but it is currently unknown whether it is indeed *N. yamamotoi* or an undescribed species.

Subclass Chaetodermomorpha

Family Chaetodermatidae

Chaetoderma argenteum Heath, 1911.
Chaetoderma attenuata Heath 1911; *Chaetoderma montereyensis* Heath 1911; *Chaetoderma montereyense* Salvini-Plawen 1993; *Chaetoderma* sp. Buckland-Nicks and Chia 1989.
Type locality: Southeast Alaska. Distribution: Behm Canal to Point Conception, California; 70–640 m; rare.

Chaetoderma chistikovi (Ivanov, 1986).
Crystallophrisson chistikovi Ivanov 1986.
Type locality: Chukchi Sea. Distribution: Known only from type locality; 280 m; rare.

Chaetoderma eruditum Heath, 1911.
Type locality: Southeast Alaska, Lynn Canal, Chatham Strait; 516–572 m; rare.

Chaetoderma glacialis (Ivanov, 1986).
Crystallophrisson glacialis Ivanov 1986.
Type locality: Chukchi Sea. Distribution: Known only from type locality; 240 m; rare.

Chaetoderma robustum Heath, 1911.
Type locality: South of the Alaska Peninsula; 883 m. Distribution: Known only from type locality; rare.

Falcidens afanasjevi (Ivanov, 1986).
Chaetoderma afanasjevi Ivanov 1986.
Type locality: Chukchi Sea. Distribution: Known only from type locality; 240 m; rare.

Falcidens moskalevi (Ivanov, 1986).
Chaetoderma moskalevi Ivanov 1986.
Type locality: Chukchi Sea. Distribution: Known only from type locality; 240 m; rare.

Family Limifossoridae

Limifossor talpoideus Heath, 1904. Northern mole glistenworm.
Type locality: Southeast Alaska, Lynn Canal, Chatham Strait; 516–572 m. Distribution: Known only from type locality; rare.

Family Prochaetodermatidae

Chevroderma hadalis Ivanov, 1996.
Type locality: Kuril-Kamchatka Trench. Distribution: Kuril-Kamchatka Trench and Aleutian Trench; 7250–8390 m; rare.

Class Polyplacophora—The Chitons

About 940 species of chitons are known worldwide (Schwabe, 2005; Stebbins and Eernisse, 2009), with approximately 57 species occurring in Alaskan waters (Table 1). The higher classification follows Sirenko (2006). Many species can be identified in the field based on valve sculpturing, girdle ornamentation, and relative dimensions of the girdle and valves. Color is useful to a degree, although it can be highly variable in some species. Several sources of primary and secondary literature were used to compile the information for the chitons list: Kaas and Van Belle (1985a,b, 1987, 1990, 1994), Clark (1991, 1999, 2000, 2002a, 2002b, 2008b), Schwabe (2005), Kaas et al. (2006), and Eernisse et al. (2007).

The following species were omitted from this checklist: Austin (1985) recorded *Hanleya hanleyi* (Bean 1844) from the Bering Sea to central California, but Kaas and Van Belle (1985a) listed it as occurring only in the North Atlantic (type locality = England). Austin (1985) recorded *Chaetopleura angulata* (Spenkler 1797) off southern Alaska and the North Atlantic, but Kaas and Van Belle (1987) recorded it only in the southwestern Atlantic, and introduced to Spain (Type locality = America). Austin (1985) recorded *Amicula amiculata* (Pallas 1786) from Alaska to California, but Kaas and Van Belle (1994) recorded it only in the western North Pacific, in the Sea of Japan and the Okhotsk Sea. Austin (1985) recorded *Leptochiton alveolus* (Lovén 1846) from the North Pacific and North Atlantic, but it is restricted to the North Atlantic, with *L. belknapi* Dall 1878 replacing it in the North Pacific (Wu and Okutani, 1984; Kaas and Van

Belle, 1987). Austin (1985) recorded *Callistochiton crassicostatus* Pilsbry 1892 in Alaska, but Kaas and Van Belle (1994) recorded the northernmost locality off California. Austin (1985) recorded *Lepidochitona hartwegi* (Carpenter 1855) in Alaska, but Kaas and Van Belle (1985a) recorded the northernmost locality off Sausalito, California. Austin (1985) recorded *Dendrochiton thamnopora* (Berry 1911) in Alaska, but Kaas and Van Belle (1985a) recorded the northernmost locality off California.

Ischnochiton alascensis Thiele 1909, which was previously known only from its type locality in southern Alaska, is a junior synonym of *Stenoplax petaloides* (Gould 1846), which is endemic to the Hawaiian Islands. *Ischnochiton alascensis* was collected in the Hawaiian Islands and mislabeled as being collected in Alaska (Clark[4]).

Order Lepidopleurida

Suborder Lepidopleurina

Family Leptochitonidae

Hanleyella asiatica Sirenko, 1973.

Type locality: Kuril Islands, off Simushir Island. Distribution: Eastern Chukchi and Bering seas; north of Umnak Island, Aleutian Islands; Gulf of Alaska, west of Dall Island; Okhotsk Sea; 10–258 m.

Remarks: Clark (1991) found records of this species in the Aleutians and the Gulf of Alaska, previously known only from the western North Pacific.

Hanleyella oldroydi (Dall, 1919). Tiny black spotted sea-cradle.

Type locality: California, Monterey. Distribution: Kosciusko Island, Aleutian Islands, Alaska to Cabo San Quintin, Baja California; 18–455 m.

Leptochiton alascensis (Thiele, 1909).

Lepidopleurus alascensis Thiele 1909.

Type locality: Unknown. Distribution: Bering Island to Southeast Alaska; 0–40 m; common throughout the Aleutians and western Gulf of Alaska.

Leptochiton belknapi Dall, 1878.

Leptochiton benthus Haddon 1886; *Lepidopleurus similis* E. A. Smith 1894; *Lepidopleurus mesogonus* Dall 1902; *Lepidopleurus halistreptus* Dall 1902; *Lepidopleurus luridus* Dall 1902; *Lepidopleurus farallonis* Dall 1902; *Lepidopleurus giganteus* Nierstrasz 1905; *Lepidopleurus simplex* Nierstrasz 1905; *Lepidopleurus halistreptus abbreviatus* Dall 1908; *Lepidopleurus opacus* Dall 1908; *Lepidopleurus japonicus* Thiele 1909; *Parachiton opiparus* Iredale and Hull1925; *Lepidopleurus japonicus aequivalvus* Bergenhayn 1933; *Lepidopleurus aequispinnus* Bergenhayn 1933.

Type locality: North of Chagulak Island, Aleutian Islands, Bering Sea, Alaska. Distribution: Bering Sea; Aleutian Islands; Panama Bay; Galapagos Islands; Sea of Japan; 160–4140 m; uncommon.

Leptochiton nexus Carpenter, 1864.

Lepidopleurus ambustus Berry 1907; *Lepidopleurus (Xiphiozona) heathi* Berry 1919; *Lepidopleurus (Leptochiton) ambustus* Dall 1919; *Lepidopleurus (Leptochiton) lycurgus* Dall 1919.

Type locality: Catalina Island, California. Distribution: Alaska (Cohen Island) south to Punta Abreojos, Baja California; intertidal zone to 144 m.

Leptochiton rugatus (Carpenter *in* Pilsbry, 1892).

Lepidochiton internexus var. *rugatus* Dall 1879, *nomen nudum.*; *Leptochiton internexus* Carpenter in Dall 1879, *nomen nudum.*; *Leptochiton cancellatus*: Dall 1879 *auctt.* non *Chiton cancellatus* Sowerby II 1840; *Lepidopleurus rugatus* Carpenter *in* Pilsbry 1892; *Lepidopleurus internexus* Carpenter in Pilsbry 1892; *Lepidopleurus assimilis* Thiele 1909; *Lepidopleurus alascensis* Thiele 1909; *Leptochiton rugatus*: Ferreira 1979.

Type locality: Mexico, Baja California. Distribution: Eastern Pacific, from Magdalena Bay, and most of the Gulf of California, Mexico to Southeast Alaska; in the western Pacific, from South Korea, and possibly parts of the Sea of Japan, the Okhotsk Sea, and the Bering Sea; intertidal zone to 453 m.

Order Chitonida

Suborder Chitonina

Superfamily Chitonoidea

Family Ischnochitonidae

Lepidozona (Lepidozona) interstincta (Gould, 1852).

Chiton interstinctus Gould 1852; *Ischnochiton radians* Carpenter *in* Pilsbry 1892; *Ischnochiton interstinctus*: Haderlie and Abbott 1980.

Type locality: Puget Sound, Washington. Distribution: Western coast of North America, between Prince William Sound, Alaska, and Catalina Island, California; intertidal zone to 72 m.

Lepidozona (Lepidozona) mertensii (von Middendorff, 1847).

Chiton mertensii von Middendorff 1847; *Lepidozona mertensii* Putman 1980.

Type locality: Fort Ross, Sonoma County, California. Distribution: Western coast of North America, between Auke Bay, Alaska, and Sacramento Reef, Baja California, Mexico; northern Japan: Hakodate and Mutsu Bay; intertidal zone to 100 m.

Lepidozona (Lepidozona) retiporosa (Carpenter, 1864).

Ischnochiton (Trachydermon) retiporosus Carpenter 1864, *nomen nudum; Trachydermon retiporosus* Carpenter 1864; *Leptochiton punctatus* Whiteaves 1887; *Ischnochiton* *aureotinctus* Carpenter in Pilsbry 1892; *Ischnochiton venezius* Dall 1919; ?*Ischnochiton subexpressus* Carpenter in Palmer 1945, *nomen nudum; Lepidozona retiporosa*: Ferreira 1978.

Type locality: Puget Sound, Washington. Distribution: Western coast of North America, between Edna Bay, Kosciusko Island, Alaska, and the tip of Baja California, Mexico; intertidal zone to 1463 m.

Lepidozona (Lepidozona) willetti (Berry, 1917).

Ischnochiton (Lepidozona) willetti Berry 1917; *Ischnochiton (Lepidozona) catalinae* Willett 1941; *Lepidozona willetti*: Ferreira 1978.

Type locality: Forrester Island, Alaska. Distribution: Western coast of North America, from the type locality south to Punta Abreojos, Baja California, Mexico; 13–274 m.

Stenosemus albus (Linnaeus, 1767). Northern white chiton.

Chiton albus Linnaeus 1767; ?*Chiton minimus* Gmelin 1791; *Chiton oryza* Spengler 1797; *Chiton aselloides* Lowe 1825; *Chiton sagrinatus* Couthouy 1838; *Lophyrus albus* (Linnaeus, 1767) var. *infuscatus* Sparre Schneider 1881; *Lophyrochiton albus*: Jakovleva; *Lophyrochiton albus* var. *infuscatus* Jakovleva 1952; *Ischnochiton albus*: Matthews 1953; *Ischnochiton (Lepidopleuroides) albus*: Sirenko 1979; *Stenosemus albus*: Ferreira 1981; *Ischnochiton (Stenosemus) albus*: Strack 1982.

Type locality: Ocean around Iceland. Distribution: Arctic-boreal, circumpolar in the Arctic, widespread in the northern Atlantic Ocean from Spitsbergen south to Vigo, Spain, and near the Azores; in the North Pacific Ocean southeast to San Diego, California and southwest to the Okhotsk Sea and the Sea of Japan; subtidal zone to 1000 m, common depth of 10–100 m; common.

Stenosemus golikovi Sirenko, 1994.

Type locality: Iona Island, Sea of Okhotsk. Distribution: Bering Island (Commander Islands); Unimak Island (Aleutian Islands); Shikotan Island (Kuril Islands); 200–400 m.

Stenosemus sharpii (Pilsbry, 1896). Sharp's white chiton.

Trachydermon sharpii Pilsbry 1896.

Type locality: Unalaska Bay, Unalaska Island, Aleutian Islands. Distribution: Eastern and central Aleutian Islands, Unalaska Island to Amchitka Island; 2–130 m.

Remarks: This species has been considered a junior synonym of *Stenosemus albus* (Linnaeus 1767), but Clark (2002b) considered it valid based on several morphological characteristics.

Tripoplax abyssicola (A. G. Smith and Cowan, 1966). Deep-sea chiton.

Ischnochiton abyssicola A. G. Smith and Cowan 1966; *Stenosemus abyssicola*: Ferreira 1981.

Type locality: Queen Charlotte Sound, British Columbia. Distribution: Between the Semidi Islands, Aleutian Islands, and Trinidad, California; 146–2000 m; common.

Tripoplax allyni (Ferreira, 1977).

Ischnochiton allyni Ferreira 1977; *Tripoplax allyni* 1983.

Type locality: North side of Constantine, Amchitka Island, Aleutian Islands. Distribution: Known only from type locality; 17–27 m.

Tripoplax attuensis Clark, 2000.

Type locality: Murder Point, Massacre Bay, Pacific side of Attu Island, Near Islands, Aleutian Islands. Distribution: Known only from type locality; depth unknown; rare.

Tripoplax baxteri Clark, 2000.

Type locality: Eider Point, west side of entrance to Unalaska Bay, Bering Sea side of Unalaska Island, Aleutian Islands. Distribution: Known only from type locality; depth unknown; rare.

Tripoplax beringiana (Clark, 2000). Bering chiton.

Lepidozona (Tripoplax) ima Sirenko: Clark 1991 (in part); *Lepidozona (Tripoplax) beringiana* Clark 2000.

Type locality: South of Semisopochnoi Island, Rat Islands, Aleutian Islands. Distribution: Known only from type locality; 121 m; rare.

Tripoplax ima Sirenko, 1975.

Type locality: Commander Islands, Bering Island. Distribution: Bering Sea, north of Umnak Island, Aleutian Islands; south of Rat Island, Aleutian Islands; Baranof Island, Southeast Alaska; 100–1180 m.

Tripoplax trifida (Carpenter, 1864). Grooved chiton.

Ischnochiton (Trachydermon) trifidus Carpenter 1864, *nomen nudum; Trachydermon trifidus* Carpenter 1864; *Ischnochiton ritteri* Dall 1919; *Ischnochiton trifidus*: Putman 1980.

Type locality: Puget Sound, Washington. Distribution: Shumagin Islands, Alaska; Dutch Harbor, Unalaska Island, Aleutian Islands; northeast of Middleton Island, Gulf of Alaska south to Puget Sound, Washington; intertidal zone to 110 m.

Suborder Acanthochitonina

Superfamily Mopalioidea

Family Tonicellidae

Subfamily Tonicellinae

Boreochiton beringensis (Jakovleva, 1952).

Tonicella beringensis Jakovleva 1952.

Type locality: Bering Island, Commander Islands, Bering Sea, Russia. Distribution: Arctic Alaska to central Washington; Aleutian Islands; Commander Islands; intertidal zone to 300 m.

Cyanoplax dentiens (Gould, 1846).

Chiton dentiens Gould 1846; *Lepidochitona dentiens* (Gould 1846); *Trachydermon pseudodentiens* Carpenter 1864; *Trachydermon (Cyanoplax) raymondi* Pilsbry 1894; *Cyanoplax dentiens cryptica* Kues 1974; *Lepidochitona dentiens*: Ferreira 1982; non *Ischnochiton (Trachydermon) dentiens*: Pilsbry 1892, *nec Lepidochitona dentiens*: Berry 1922 (= *Lepidochitona keepiana* Berry 1948).

Type locality: Puget Sound, Washington. Distribution: Boswell Bay, Alaska south to Puente Santo Tomas, Mexico; intertidal zone to 6 m.

?Dendrochiton flectens (Carpenter, 1864). Painted dendrochiton.

Ischnochiton (Trachydermon) flectens Carpenter 1864 (*nomen nudum*); *Trachydermon flectens* Carpenter 1864; *Lepidochitona flectens* (Carpenter 1864); *Mopalia heathii* Pilsbry 1898; *Trachydermon flectens* var. *montereyensis* Bartsch in Berry 1907 (*nomen nudum*); *Basiliochiton flectens*: Putman 1980.

Type locality: Monterey, California. Distribution: ?Southern Alaska to Baja California, Mexico; intertidal zone to 38 m.

Remarks: Austin (1985) recorded this species in southern Alaska, but Kaas and Van Belle (1985b) recorded the northernmost locality off Queen Charlotte Island, British Columbia.

Dendrochiton semilirata Berry, 1927.

Lepidochitona semiliratus (Berry 1927).

Type locality: Canada, British Columbia, Vancouver Island, Departure Bay. Distribution: British Columbia to Pyramid Cove, San Clemente Island, California; Inlet Point, Port Chester, Annette Island, Southeast Alaska; 38–141 m; rare.

Lepidochitona aleutica (Dall, 1878).

Trachydermon (Trachyradsia) aleutica Dall 1878; *Trachydermon (Spongioradsia) aleutica* Pilsbry 1894; *Spongioradsia aleutica:* Sirenko and Minichev 1975.

Type locality: Amchitka Island, western Aleutian Islands. Distribution: North Pacific Boreal; Sea of Japan, Bering Sea, Aleutian Islands; intertidal zone.

Tonicella insignis (Reeve, 1847). Remarkable red chiton.

Chiton insignis Reeve 1847; *Tonicella submarmorea (*non von Middendorff 1846) : Dall 1879; *Tonicella insignis*: Leloup 1945.

Type locality: Sitka, Alaska. Distribution: Western coast of North America from eastern Aleutian Islands and Montague Island, Prince William Sound, Alaska, to Oregon; intertidal zone to 60 m.

Tonicella lineata (Wood, 1815).

Chiton lineatus Wood 1815; *Chiton (Stenosemus) lineatus* Wood var. *fusca* von Middendorff 1847; *Lepidochitona lineata*: Oldroyd 1927 (in part); *Tonicella lineata*: Ferreira 1982.

Type locality: Unknown, subsequently designated as Sitka, Alaska (Sirenko, 1974) and restricted to Old Sitka, 10 km north of Sitka, Baranof Island, Alexander Archipelago, Southeast Alaska (Clark, 1999). Distribution: Central Aleutian Islands (Kuluk Bay, Adak Island) to central California (Monterey Bay); intertidal to 17 m; abundant and common in the northern part of its range (Aleutian Islands and southern Alaska) and uncommon in California.

Tonicella marmorea (O. Fabricius, 1780). Mottled red chiton.

Chiton marmoreus Fabricius 1780.

Type locality: Greenland. Distribution: Widespread boreal Arctic; intertidal and littoral.

Tonicella submarmorea (von Middendorff, 1847).

Chiton (Platysemus) submarmoreus von Middendorff 1847; *Chiton sitchensis* von Middendorff 1847.

Type locality: Tugar Bay, Sea of Okhotsk. Distribution: Aleutian Islands; Japan and the Okhotsk Sea; depth unknown.

Tonicella undocaerulea Sirenko, 1973.

Lepidochitona lineata non Wood: Oldryod 1927 (in part); *Tonicella lineata* non Wood: Taki 1938.

Type locality: Bay of Minonosok, Posjet Strait, Sea of Japan. Distribution: Western Pacific from Mutsu Bay, Honshu Island, Japan, to near Uglegorsk, southeastern Sakhalin Island, Russia, and the Okhotsk Sea from Iturup Island, Kuril Islands, Russia; eastern Pacific from Kodiak Island and Naked Island, Prince William Sound, Alaska, to San Miguel Island, California; intertidal zone to 38 m.

Tonicella venusta Clark, 1999.

Tonicella rubra non Linnaeus: Berry 1917 (in part); *Lepidochitona lineata*: Oldroyd 1927 (in part); *Lepidochitona rubber* non Linnaeus: Oldroyd 1927 (in part); *Tonicella marmorea* non Fabricius: Baxter 1983.

Type locality: Mountain Point, 8 km south of Ketchikan, Revillagigedo Island, Alexander Archipelago, Southeast Alaska. Distribution: Kodiak Island and northern Gulf of Alaska to Isla Cedros, Baja California, Mexico; intertidal zone to 140 m.

Subfamily Juvenichitoninae

Juvenichiton albocinnamoneus Sirenko, 1975.

Type locality: Onekotan, Kuril Islands. Distribution: Kuril Islands to the Commander Islands; Ram's Head Point, near entrance to Chernofski Harbor, northwestern end of Unalaska Island and Korovin Bay, Atka Island, Aleutian Islands; intertidal zone to 45 m.

Remarks: Kaas and Van Belle (1985b) placed this species in the synonymy of *Juvenichiton saccharinus* (Dall 1878), but Clark (1991) reinstated it as a valid species.

Juvenichiton deplanatus (Sirenko, 1975).

Nanichiton deplanatus Sirenko 1975.

Type locality: Luzhin Strait, Paramushir Island, Kuril Islands. Distribution: Northern Kuril Islands to Commander Islands; Nazan Bay, Atka Island, Aleutian Islands; intertidal zone to 10 m.

Juvenichiton saccharinus (Dall, 1878).

Tonicella saccharina Dall 1878; *Lepidochitona saccharina*: Dall 1921; *Lepidochiton saccharina*: La Rocque 1953; *Juvenichiton kommandorensis* Sirenko 1975.

Type locality: Yukon Harbor, Shumagin Islands, Alaska. Distribution: Alaska—Aleutian Islands (Kiska Harbor and Captains Bay, Unalaska), St. Paul, Pribilof Islands, and Shumagin Islands; Kuril Islands, from Paramushir to Urup Island, and near Kasatka Bay, Iturup Island; intertidal zone to 45 m.

Micichiton callisto Clark, 2002.

Type locality: Northwestern end of Atka Island, Bering Sea side, point at east side of entrance to Crescent Bay, Andreanof Islands, Aleutian Islands; 10 m. Distribution: Known only from the type locality; rare.

Micichiton grandispina Sirenko, 1975.

Type locality: Cape Gorelyi, Onekotan Island, Kuril Islands. Distribution: Kuril Islands to the Commander Islands; Korovin Bay, Atka Island, Aleutian Islands; intertidal zone to 50 m.

Family Schizoplacidae

Schizoplax brandtii (von Middendorff, 1847).

Chiton brandtii von Middendorff 1847; *Chiton (Stenosemus) brandtii* (von Middendorff 1847); *Schizoplax multicolor* Dall 1920.

Type locality: Shantar Bay, Okhotsk Sea. Distribution: Eastern Bering Sea (Pribilof Islands); Aleutian Islands south to British Columbia; Russian Arctic; Okhotsk Sea; Bering Island; 0–40 m.

Family Mopaliidae

Amicula vestita (Broderip and G. B. Sowerby I, 1829). Concealed chiton.

Chiton amiculatus non Pallas 1787; *Chiton vestitus* Broderip and G. B. Sowerby I 1829; *Chiton emersonii* Couthouy 1838; *Chiton emersonianus* Gould 1841; *Chiton pallasii* von Middendorff 1847; *Amicula vestita*: Leloup 1942; *Amicula rosea* Jakovleva 1952.

Type locality: Arctic Ocean. Distribution: Arctic Ocean, East Siberian, Chukchi, and Okhotsk seas, south to the Aleutian Islands in the North Pacific and south of Cape Cod, Massachusetts, in the North Atlantic; intertidal zone to 100 m; common.

Cryptochiton stelleri (Middendorff, 1847). Giant Pacific chiton or gumboot.

Chiton stelleri von Middendorff 1847.

Type locality: Kamchatka, in Petropavlovsk Harbor. Distribution: Aleutian Islands to San Nicolas Island, California; Kamchatka, Kuril Islands, Japan; intertidal zone to 20 m; common.

Katharina tunicata (Wood, 1815). Black chiton.

Chiton tunicatus Wood 1815; *Katharina douglasiae* Gray 1847, *nomen nudum; Katharina tunicata*: Leloup 1940.

Type locality: Not stated (presumed to be the west coast of North America). Distribution: Western coast of North America, from the Aleutian Islands south to Catalina Island, California; surf-zone to 40 m.

Remarks: Jakovleva (1952) reported the species from the Sea of Japan, but that statement has not been corroborated by recent findings.

Mopalia cirrata Berry, 1919.

Type locality: Dundas Bay, Icy Strait, Alaska. Distribution: Western shores of North America, from Kodiak Island, Alaska, south to San Francisco Bay, California; subtidal zone.

Mopalia egretta Berry, 1919. Egret plume mopalia.

Type locality: Forrester Island, Alaska. Distribution: Southeastern shores of Alaska, from the Kenai Peninsula south to Puget Sound, Washington; 25–77 m.

Mopalia ferreirai Clark, 1991.

Mopalia lowei, non Pilsbry 1918: Burghardt and Burghardt 1969; *Mopalia* sp. Burghardt and Burghardt 1969; *Mopalia ferreirai* Clark 1991.

Type locality: Rotary Beach, Revillagigedo Island, Alaska. Distribution: Western shores of North America between Prince William Sound, Alaska, and Carmel Bay, Monterey County, California; 0–18 m.

Mopalia hindsii (Sowerby *in* Reeve, 1847).

Chiton hindsii Sowerby in Reeve 1847; *Chiton hindsianus* Clessin 1904; *Mopalia hinds*: Leloup 1942; *Mopalia hindsi recurvans* Barnawell 1960; *Mopalia recurvans*: Burghardt and Burghardt 1969; *Mopalia laevior recurvans*: Clark 1983.

Type locality: San Francisco Bay, California. Distribution: Western shores of North America, from Kodiak Island, Alaska, south to San Luis Obispo Bay, California; intertidal zone.

Mopalia imporcata Carpenter, 1864.

Mopalia celetoides Dall 1919; *Mopalia cithara* Berry 1951; *Mopalia imporcata*: Palmer 1958.

Type locality: Puget Sound, Washington. Distribution: Western shores of North America, from Kachemak Bay, Kenai Peninsula, Cook Inlet, Alaska, south to Punta Santo Tomas, Baja California Norte, Mexico; intertidal zone to 120 m.

Mopalia kennerleyi Carpenter, 1864.

Mopalia grayii Carpenter 1864 (*nomen nudum*); *Mopalia muscosa kennerleyi* Carpenter 1864; *Chaetopleura thouarsiana* de Rochebrune 1882; *Mopalia ciliata* var. *wosnessenskii* (Middendorff 1847): Pilsbry 1892, Leloup 1942; *Mopalia ciliata* *wosnessenskii* (Middendorff 1847): Abbott 1974; *Mopalia ciliata* (Sowerby 1840): Burghardt and Burghardt 1969 (in part), Smith 1977 (in part), Putman 1980 (in part), Baxter 1987, Kaas and Van Belle 1994 (in part).

Type locality: Tacoma Narrows, Puget Sound, Washington. Distribution: Southern Bering Sea; Aleutian Islands; Gulf of Alaska south to Monterey Bay, California; subtidal zone.

Remarks: This species has been confused with *M. ciliata* (Sowerby 1840), a California species (Clark, 2008a).

Mopalia lignosa (Gould, 1846).

Chiton lignosus Gould 1846; *Chiton eschscholtzii* von Middendorff 1847; *Chiton merckii* von Middendorff 1847; *Mopalia simpsonii* Gray 1847, *nomen nudum; Chiton lignarius* Gould in Carpenter 1857, *nomen nudum* in synonymy of *Chiton lignosus* Gould; *Mopalia insignis* Newcomb in Pilsbry 1893, *nomen nudum; Mopalia muscosa lignose* (Gould, 1846) forma *elevata* Pilsbry 1893; *Mopalia lignose*: Leloup 1942; *Chiton (Chaetopleura) lignosus*: Johnson 1964; non *Mopalia ciliata elevata*: Dall 1921 [= *Mopalia ciliata* (Sowerby, 1840)].

Type locality: Puget Sound, Washington. Distribution: Western coast of North America, between Sitka, Alaska, and Magdalene Bay, Baja California, Mexico; intertidal zone.

Mopalia muscosa (Gould, 1846).

Chiton armatus Nuttall in Jay 1839, *nomen nudum; Chiton setosus*: Sowerby 1839 (non *Chiton setosus* Sowerby, 1832); *Chiton muscosus* Gould 1846; *Chiton ciliatus*: Reeve 1847 (non *Chiton ciliatus* Sowerby, 1840); *Chiton colliei* Gray in Reeve 1847; *Chiton ornatus* Nuttall in Carpenter 1855; *Mopalia consimilis* Nuttall in Carpenter 1855, *nomen nudum* in synonymy of *Chiton muscosus* Gould 1846; *Mopalia muscosa*: Leloup 1940; *Chiton (Chaetopleura) muscosus*: Johnson 1964.

Type locality: Puget Sound, Washington. Distribution: Western coast of North America, between Shumagin Islands, Alaska, and Rosario, Baja California, Mexico; intertidal zone.

Mopalia phorminx Berry, 1919.

Type locality: Point Piños, Monterey Bay, California. Distribution: Western shores of North America, from Naked Island, Prince William Sound, Alaska, south to San Pedro, California; 18–183 m.

Mopalia sinuata Carpenter, 1864.

Callistochiton aepynotus Dall 1919; *Mopalia goniura* Dall 1919; *Mopalia sinuata*: Leloup 1942.

Type locality: Puget Sound, Washington. Distribution: Western shores of North America, from Kachemak Bay, Kenai Peninsula, Cook Inlet, Alaska, south to Avila Beach, San Luis Obispo County, California; intertidal zone to 200 m.

Mopalia spectabilis Cowan and Cowan, 1977.

Mopalia carolinae Cowan and Cowan 1977, *nomen nudum.*

Type locality: Navy Channel, Georgia Strait, British Columbia. Distribution: Western shores of North America, from Kodiak Island and Kenai Peninsula, Alaska, south to Government Point, Santa Barbara County, California; intertidal zone to 10 m.

Mopalia swanii Carpenter, 1864. Swan's mopalia.

Mopalia kennerleyi var. *swanii* Carpenter 1864; *Mopalia swan(n)ii*: Palmer 1958.

Type locality: Tatoosh Island, Canada. Distribution: Western shores of North America, from Dutch Harbor, Unalaska Island, Aleutian Islands, south to Malibu, Los Angeles County, California; intertidal zone.

Mopalia vespertina (Gould, 1852).

Chiton vespertinus Gould 1852, Dall 1879 [in synonymy of *M. ciliata* (Sowerby, 1840) subsp. *lignosa* (Gould, 1846)], Pilsbry 1893 [in synonymy of *M. lignosa* (Gould, 1846)]; *Mopalia muscosa laevior* Pilsbry 1918; *Mopalia laevior:* Taki 1955.

Type locality: Puget Sound, Washington. Distribution: Western shores of North America, from Sitka, Alaska, south to Olympia, Washington; intertidal zone.

Placiphorella borealis Pilsbry, 1893.

Placiphorella stimpsoni: Dall 1896 (in part) [non *Placiphorella stimpsoni* (Gould, 1859)]; *Placiphorella* sp. O'Clair 1977.

Type locality: Bering Sea, Commander Islands, Bering Island, Russia. Distribution: Korovin Bay, Atka Island, Aleutian Islands; Commander Islands; Hokkaido Island, Japan; intertidal zone to 18 m.

Placiphorella pacifica Berry, 1919. White veiled chiton.

Placiphorella ushakovi Yakoleva 1952.

Type locality: Kasaan Bay, Prince of Wales Island, Southeast Alaska. Distribution: Bering Sea to southern California; to a depth of 878 m; common.

Remarks: Kaas and Van Belle (1994) considered this species a junior synonym of *P. atlantica* (Verrill and Smith 1882), but Saito et al. (2008) considered it valid.

Placiphorella rufa Berry, 1917. Red veiled chiton.

Placiphorella borealis Pilsbry, Vermeij et al. 1990, non *P. borealis* Pilsbry 1893.

Type locality: Forrester Island, Alaska. Distribution: Kachemak Bay, Kenai Peninsula, Alaska; Edward King Island, Barclay Sound, and Walters Point, Owen Bay, Sonora Island, British Columbia; intertidal zone to 45 m.

Placiphorella velata Carpenter *in* Dall, 1879.

Placiphorella stimpsoni (Gould) Dall 1921 (in part); *Placiphorella* sp. Kohl 1974.

Type locality: Todos Santos Bay, Baja California. Distribution: Western coast of North America, Saint Lazaria Island, Kruzof Island, at the entrance to Sitka Sound, Baranof Island, Alaska, Hinchinbrook Island, Prince

William Sound, Alaska, south to Todos Santos Bay, Baja California Norte, Mexico; intertidal zone to 18 m.

Class Gastropoda—The Snails and Slugs

Gastropoda is the largest molluscan class and the second most speciose animal class. It also contains the greatest diversity of described marine species. Gastropods have adapted to a variety of environments and are found in almost every ecosystem on the planet. Estimates of the numbers of extant gastropod species range widely, with the minimum estimate around 40,000 and the maximum approaching 150,000 (Lindberg et al., 2004). About 30,000 species of marine gastropods are known worldwide (Bouchet and Rocroi, 2005). The gastropods are the most diverse and species-rich group of invertebrates in Alaskan waters, with approximately 621 species (Table 1). The Buccinidae is particularly well represented in Alaskan waters, with approximately 135 species. Despite the high diversity, unresolved taxonomic questions plague efforts to evaluate and synthesize information. Abundance records came from Abbott (1974) and the NMFS, AFSC, RACE survey database, 2012. The higher-level classification (family and above) follows Bouchet and Rocroi (2005). James McLean of the Los Angeles County Museum of Natural History (McLean[5]) is currently working on two illustrated books on the eastern North Pacific gastropods, similar in scope to that of Coan et al.'s (2000) book on the bivalves. He is describing hundreds of new species and will include a number of new genera, so it can be expected that this section will be dramatically different in future editions.

Several sources of secondary literature were used to help compile the information for the list of gastropods: Oldroyd (1927), Palmer (1958), MacGinitie (1959), Rice (1968), Macpherson (1971), Abbott (1974), Golikov (1980), Baxter (1987), Vermeij et al. (1990), Behrens (1991, 2004), McLean and Gosliner (1996), Turgeon et al. (1998), Gulbin and Golikov (2001), Bouchet and Rocroi (2005), Gulbin (2005), Lamb and Hanby (2005), Kantor and Sysoev (2006), Fraussen and Terryn (2007), and Carmona et al. (2013). Gastropods are usually identified based on shell characteristics, but shell morphology can be highly plastic with a considerable degree of intraspecific variation. This has caused much taxonomic confusion, and thus many ambiguities, such as synonymies and the current status of species, were discovered during the construction of this list. As a result of such confusion, some subjective judgment was applied, and wherever possible, this is mentioned in the "Remarks" section.

Clade Patellogastropoda

Superfamily Lottiodea

Family Acmaeidae

Acmaea mitra Rathke, in Escholtz, 1833. Whitecap limpet.

Type locality: Bering Sea. Distribution: ?Eastern Bering Sea; Aleutian Islands and southern Alaska to Baja California, Mexico; low tide and shallow subtidal zone; common.

Erginus apicinus (Dall, 1879). Cap limpet.

Problacmaea apicina Dall 1879.

Type locality: Chika Island, Akutan Pass, Alaska. Distribution: Pribilof, Shumagin, and throughout the Aleutian islands; 0–40 m.

Erginus moskalevi (Golikov and Kussakin, 1972).

Problacmaea moskalevi Golikov and Kussakin 1972.

Type locality: Bolshoi Shantar Island, Okhotsk Sea. Distribution: As far east as Unalaska, Aleutian Islands in the North Pacific; depth unknown.

Erginus puniceus Lindberg, 1988.

Type locality: 2.5 km North of Tomari, Aomori Pref, Honshu, Japan. Distribution: As far east as Attu Island, Aleutian Islands in the North Pacific; Kuril Islands; Sakhalin; 0–60 m.

Erginus sybariticus (Dall, 1871). Lush limpet.

Problacmaea sybaritica Dall 1871.

Type locality: Type material collected at St. George Island, Pribilof Islands; False Pass, Alaska Peninsula, and near Mt. Isanotsky; Japan. Distribution: Throughout the Aleutian Islands; Pribilof Islands; southern Alaska; Japan; Plover Bay; eastern Siberia; depth unknown.

Niveotectura funiculata (Carpenter, 1864). Corded white limpet.

Scurria funiculata Carpenter 1864; *Scurria mitra tenuisculpta* Carpenter 1866; *Acmaea mitra* var. *funiculata* (Carpenter 1864); *Acmaea funiculata* (Carpenter 1864).

Type locality: Monterey, California. Distribution: Shumagin Islands, Alaska, to Magdalena Bay, Baja California, Mexico; low tide to 20 m; common.

Rhodopetala rosea (Dall, 1872). Pink limpet.

Nacella rosea Dall 1872; *Acmaea rosea* (Dall 1872).

Type locality: Alaska. Distribution: Throughout the Aleutian Islands; south to California; depth unknown.

Family Lottiidae

Lottia asmi (Middendorff, 1849). Black limpet.

Acmaea asmi Middendorff 1847; *Collisella asmi* (Middendorff 1847).

Type locality: Sitka, Alaska. Distribution: Southern Alaska to Mexico; attached to the gastropod *Tegula*.

Lottia borealis (Lindberg, 1982). Boreal limpet.

Collisella borealis Lindberg 1982.

Type locality: South side of Gibson Island, Chichagof Harbor, Attu Island, Aleutian Islands. Distribution: Throughout the Aleutian Islands; intertidal zone.

Lottia digitalis (Rathke, 1833). Fingered limpet.

Acmaea digitalis Rathke 1833.

Type locality: Sitka (Baranof Island, Alexander Archipelago, Alaska). Distribution: Aleutian Islands (as far west as Kiska) to Socorro Island, Mexico; Kamchatka; intertidal to shallow subtidal zones; common.

Lottia fenestrata (Reeve, 1855). Fenestrate or chocolate limpet.

Acmaea fenestrata Reeve 1855; *Tectura fenestrata* (Reeve 1855); *Collisella fenestrata* (Reeve 1855); *Notoacmaea fenestrata* (Reeve 1855); *Acmaea cribraria*: Flora and Fairbanks 1966.

Type locality: Not traced. Distribution: Aleutian Islands to Baja California, Mexico; mid to low intertidal zones; common.

Lottia insessa (Hinds, 1842). Seaweed limpet.

Discurria insessa Hinds 1842; *Notoacmaea incessa* (Hinds 1842); *Acmaea incessa* (Hinds 1842); *Collisella insessa* (Hinds 1842); *Patella incessa* (Hinds 1842).

Type locality: San Diego, California. Distribution: Southern Alaska to northern Mexico; intertidal zone; common.

Remarks: Found on stalks or holdfasts of large seaweeds.

Lottia instabilis (Gould, 1846). Unstable limpet.

Acmaea instabilis Gould 1846; *Notoacmaea instabilis* (Gould 1846); *Collisella instabilis* (Gould 1846); *Acmaea ochracea* Dall 1871.

Type locality: Neah Bay, Washington. Distribution: Northern Alaska to southern California; intertidal zone to 73 m; moderately common.

Lottia painei Lindberg, 1987.

Type locality: Not traced. Distribution: Throughout the Aleutian Islands; depth unknown.

Lottia pelta (Rathke, 1833). Shield limpet.

Acmaea pelta Rathke 1833; *Collisella pelta* (Rathke 1833); *Acmaea cassis* Rathke 1833; *Acmaea olympica* Dall 1914.

Type locality: Sitka, Alaska. Distribution: Southern Bering Sea and throughout the Aleutian Islands to Baja California, Mexico; Okhotsk Sea; Japan; 0–20 m; common.

Lottia persona (Rathke, 1833). Mask limpet.

Acmaea persona Rathke 1833; *Tectura persona* (Rathke 1833); *Notoacmaea persona* (Rathke 1833); *Collisella persona* (Rathke 1833).

Type locality: Sitka, Alaska. Distribution: Aleutian Islands to Monterey, California; Japan; 0–8 m.

Lottia scutum (Rathke, 1833). Plate limpet.

Acmaea scutum Rathke 1833; *Tectura scutum* (Rathke 1833); *Notoacmaea scutum* (Rathke 1833); *Collisella scutum* (Rathke 1833); *Acmaea pintadina* (Gould 1846).

Type locality: Sitka (Baranof Island, Alexander Archipelago, Alaska). Distribution: Northern Alaska to northern Mexico; throughout the Aleutian Islands; Commander and North Kuril Islands; Japan; Siberia; 0–15 m.

Lottia triangularis (Carpenter, 1864). Triangular limpet.

Nacella triangularis Carpenter 1864; *Acmaea triangularis* (Carpenter 1864); *Acmaea triangularis casta* Carpenter in Dall 1871.

Type locality: Monterey, California. Distribution: Sitka, Alaska to the Gulf of California; intertidal to shallow subtidal zones; uncommon.

Tectura rosacea (Carpenter, 1864). Rosy Pacific limpet.

Acmaea rosacea Carpenter 1864; *Acmaea semirubida* Dall 1914.

Type locality: San Pedro, California. Distribution: Ketchikan, Alaska to Baja California, Mexico; sublittoral zone to 37 m; common.

Testudinalia tessulata (O. F. Müller, 1776). Atlantic plate limpet.

Patella tessulata O. F. Müller 1776; *Patella testudinalis* O. F. Müller 1776; *Acmaea testudinalis* (O. F. Müller 1776); *Collisella tessulata* (O. F. Müller 1776); *Lottia testudinalis* (O. F. Müller 1776); *Tectura testudinalis* (O. F. Müller 1776); *Testudinalia tessulata* (O. F. Müller 1776); *Patella alveus* Conrad 1831; *Acmaea fergusoni* Wheat 1901.

Type locality: Not stated. Distribution: Eastern Bering Sea; throughout the Aleutian Islands; Commander and North Kuril Islands; Okhotsk Sea; Canadian and Russian Arctic; Labrador to Long Island Sound; West Greenland; Norwegian Sea; British Isles; Barents Sea; Kara Sea; White Sea; 0–280 m.

Family Lepetidae

Cryptobranchia concentrica (Middendorff, 1851). Ringed blind limpet.

Patella caeca var. *concentrica* Middendorff 1851; *Lepeta concentrica* (Middendorff 1851); *Cryptobranchia alba* Dall 1869.

Type locality: Okhotsk Sea. Distribution: Icy Cape, Arctic Ocean, to Forrester Island, Alaska, and central California; throughout the Aleutian Islands; Okhotsk Sea; Shantar Islands; intertidal zone to 80 m.

Lepeta caeca (O. F. Müller, 1776). Northern blind limpet.

Patella caeca O. F. Müller 1776; *Patella candida* Couthouy

1838; *Patella cerea* Möller 1842; *Lepeta caecoides* Carpenter 1864.

Type locality: Not designated. Distribution: Point Barrow, Alaska, to the Aleutian Islands and Vancouver Island, British Columbia; Canadian and Russian Arctic; Japan; Labrador to New England; West and East Greenland; British Isles; Azores; Norway; Svalbard; ?West Indies; 3–1300 m.

Clade Vetigastropoda

Superfamily Scissurelloidea

Family Scissurellidae

Anatoma crispata (Fleming, 1828). Crispate scissurelle.

Scissurella crispata Fleming 1828; *Scissurella striatula* Philippi 1844; *Scissurella aspera* Philippi 1844; *Scissurella angulata* Lovén 1846; *Scissurella japonica* A. Adams 1862; *Scissurella paucicostata* Jeffreys 1865; *Scissurella kelseyi* Dall 1905; *Scissurella chiricova* Dall 1919; *Scissurella palaeomphaloides* Nordsieck 1974.

Type locality: Noss Island, Shetland Islands, Scotland. Distribution: Arctic Alaska to Baja California; Japan; Arctic Seas to Florida and the West Indies; Europe; 8–2000 m; uncommon.

Anatoma disciformis (Golikov and Sirenko, 1980).

Scissurella (Schizotrochus) disciformis Golikov and Sirenko 1980.

Type locality: Near Moneron Island (Russia, northern Sea of Japan). Distribution: North Pacific from Moneron Island, Russia, to Alaska; 7–210 m.

Anatoma obtusata (Golikov and Gulbin, 1978).

Scissurella obtusata Golikov and Gulbin 1978.

Type locality: Kuril Islands. Distribution: Southern Alaska and throughout the Aleutian Islands; depth unknown.

Anatoma soyoae (Habe, 1951). Soyo scissurelle.

Schizotrochus soyoae Habe 1951.

Type locality: Japan. Distribution: Southern Alaska; 37–46 m; uncommon.

Thieleella baxteri (McLean, 1984). Baxter's slit shell.

Scissurella lamellata: McLean 1967 (non *Anatomus lamellatus* A. Adams 1862); *Anatoma baxteri* McLean 1984.

Type locality: North side of Hesketh Island, Kachemak Bay, Kenai Peninsula, Cook Inlet, Alaska. Distribution: Eastern Bering Sea to southern Alaska; intertidal zone to 200 m.

Thieleella kelseyi (Dall, 1905).

Scissurella (Schizotrochus) kelseyi Dall 1905.

Type locality: San Diego, California. Distribution: Aleutian Islands and southern Alaska to northern Baja California, Mexico; 61–2176 m.

Superfamily Haliotoidea

Family Haliotidae

Haliotis kamchatkana Jonas, 1845. Japanese or pinto abalone.

Type locality: Kamchatka Sea. Distribution: Southeast Alaska to Point Conception, California; Japan; intertidal zone; abundant north of California.

Superfamily Fissurelloidea

Family Fissurellidae

Cranopsis cucullata (Gould, 1846). Hooded puncturella.

Rimula cucullata Gould 1846; *Puncturella cucullata* (Gould 1846).

Type locality: Puget Sound, Washington. Distribution: Southern Alaska to Baja California, Mexico; intertidal zone to 137 m; common.

Cranopsis decorata (Cowan and McLean, 1969). Painted puncturella.

Puncturella decorata Cowan and McLean 1968.

Type locality: Queen Charlotte Island, British Columbia. Distribution: Sitka, Alaska, to Cortez Bank, California; 110–214 m.

Cranopsis major (Dall, 1891). Great puncturella.

Puncturella major Dall 1891.

Type locality: Akutan Island, Bering Sea. Distribution: Pribilof Islands, Bering Sea, to Dixon Entrance, Alaska; Aleutian Islands (Kiska being the westernmost limit); type material collected at 79 m.

Cranopsis multistriata (Dall, 1914). Many-rib puncturella.

Puncturella multistriata Dall 1914.

Type locality: Not specified. Distribution: Atka Island, Aleutians to San Diego and Cortez Bank, California; depth unknown; abundant.

Diodora aspera (Rathke, in Eschscholtz, 1833). Rough keyhole limpet.

Diodora murina Arnold 1903.

Type locality: Sitka, Alaska. Distribution: Cook Inlet, Alaska to Magdalena Bay, Mexico; intertidal zone to 37 m; common.

Fissurellidea bimaculata Dall, 1871. Two-spotted keyhole limpet.

Megatebennus bimaculatus (Dall 1871).

Type locality: Monterey, California. Distribution: Southern Alaska to Tres Marias Islands, Mexico; low tide; common.

Puncturella cooperi Carpenter, 1864.

Puncturella eyerdami Dall 1924.

Type locality: Catalina Island, California. Distribution: Kasaan Bay, Alaska, to Santa Rosa Island, California; 37–219 m.

Puncturella galeata (Gould, 1846). Helmet puncturella.

Rimula (Cemoria) galeata Gould 1846.

Type locality: Puget Sound, Washington. Distribution: Aleutian Islands to Redondo Beach, California; East Kamchatka;18–158 m; common.

Puncturella longifissa Dall, 1914. Long-slot puncturella.

Type locality: Bering Island, Bering Sea (western North Pacific). Distribution: Extends as far east in the Aleutian Islands as Adak; North Kuril Islands; 5–30 m.

Puncturella noachina (Linnaeus, 1771). Linné's or diluvian puncturella.

Patella noachina Linnaeus 1771; *Cemoria princeps* Mighels and A. Adams 1842.

Type locality: Drobak, Norway. Distribution: Circumpolar, south to the Aleutian Islands and Gulf of Alaska in the eastern North Pacific and Cape Cod in the western North Atlantic; 1–2212 m; common.

Scelidotoma bella (Gabb, 1865). Elegant emarginula.

Emarginula bella Gabb 1865; *Hemitoma bella*: Oldroyd 1927; *Subemarginula yatesii* Dall 1901.

Type locality: Monterey, California. Distribution: Forrester Island, Southeast Alaska, to Cabo San Martin, Baja California; intertidal zone to 110 m; uncommon.

Superfamily Trochoidea

Family Trochidae

Halistylus pupoides (Carpenter, 1864). Pupa halistyle.

Fenella pupoidea Carpenter 1864; *Fenella subpupoidea* Tryon 1887; *Halistylus subpupoideus*: Dall 1921.

Type locality: Monterey, California. Distribution: Forrester Island, Southeast Alaska, to Bahia San Bartolome, Baja California; 20–90 m; common.

Lirularia lirulatus (Carpenter, 1864). Lirulate margarite.

Margarites lirulata Carpenter 1864.

Type locality: Puget Sound, Washington. Distribution: Prince William Sound, Alaska, to San Diego, California; shallow water; common.

Remarks: *Margarites parcipictus, M. obsoletus, M. subelevatus, M. funiculatus*, and *M. conicus* of Carpenter (1864), are forms of this species (Abbott, 1974).

Lirularia succincta (Carpenter, 1864). Tucked or girgled margarite.

Gibbula succincta Carpenter 1864; *Margarites (Lirularia) succincta* (Carpenter 1864); *Margarites succincta* (Carpenter 1864); *Margarites (Pupillaria) succincta* (Carpenter 1864).

Type locality: Neah Bay, Washington. Distribution: Sitka, Alaska, to San Martin Island, Baja California; littoral zone; common.

Margarites albolineatus (E. A. Smith, 1899).

Valvatella albolineata E. A. Smith 1899.

Type locality: Commander Islands, Bering Sea. Distribution: All coasts of the Bering Sea and throughout the Aleutian Islands; intertidal zone to 146 m.

Margarites althorpensis Dall, 1919. Port Althorp margarite.

Lirularia althorpensis (Dall).

Type locality: Granite Cove, Port Althorp, Alaska. Distribution: Known only from type locality; 26 m; rare.

Margarites argentatus (Gould, 1841).

Margarita argentata Gould 1841.

Type locality: Massachusetts. Distribution: Arctic Alaska and Canada; eastern Bering Sea; North Atlantic; depth unknown.

Remarks: Abbott (1974) considered this species to be a junior synonym of *Margarites olivaceus* (Brown 1827).

Margarites avachensis Bartsch in Galkin, 1955.

Margarites (Margarites) ochotensis avachensis "Bartsch" Galkin 1955.

Type locality: Avacha Bay, Kamchatka. Distribution: Bering Strait to middle Kuril Islands; 5–2440 m.

Margarites beringensis (E. A. Smith, 1899).

Valvatella beringensis E. A. Smith 1899.

Type locality: Petrel Bank (near Semisopochnoi Island, Aleutian Islands), Bering Sea. Distribution: Arctic Ocean, Bering Sea; Plover Bay; Commander Islands; throughout the Aleutian Islands; depth unknown.

Margarites costalis baxteri McLean, 1995.

Margarites (Pupillaria) rudis Dall 1919 (non *Margarita groenlandica* var. *rudis* Mörch 1869); *Margarites (Costomargarites) baxteri* McLean 1995.

Type locality: Coal Harbor, Shumagin Islands, Alaska. Distribution: Gulf of Alaska; type material was collected at 15 m.

Margarites costalis costalis (Gould, 1841). Northern or boreal rosy margarite.

Margarita striata Broderip and G. B. Sowerby I 1829 (non Leach 1819); *Turbo cinereus* Couthouy 1838 (non Born 1778); *Trochus costalis* Gould 1841; *Margarita sordida* Hancock 1846; *Trochus polaris* Philippi 1846; *Trochus corneus* Kiener 1873.

Type locality: Massachusetts Bay. Distribution: Bering Strait to Port Etches, Alaska; Arctic Alaska and Canada (Beaufort Sea); Greenland to Cape Cod, Massachusetts; 6–2440 m; common.

Margarites frigidus Dall, 1919. Polar margarite.
Type locality: Arctic Ocean north of Bering Strait. Distribution: Occurs as far south as Nunivak Island in the eastern North Pacific; 29–55 m.

Margarites giganteus (Leche, 1878). Giant margarite.
Margarites argentatus var. *gigantea* Leche 1878; *Margarites frielei* Krause 1885.
Type locality: Not stated specifically, five localities near Novaya Zemlya. Distribution: Arctic seas to the Aleutian Islands and Japan; 4–920 m.

Margarites healyi Dall, 1919.
Margarites (Pupillaria) healyi 1919; *Pupillaria healyi* (Dall 1919).
Type locality: Arctic Ocean, north of Bering Strait. Distribution: Known only from type locality; depth unknown; rare.

Margarites helicinus (Phipps, 1774). Helicina margarite.
Turbo helicinus Phipps 1774; *Helix margarita* Montagu 1808.
Type locality: North side of Spitsbergen. Distribution: Arctic seas to Alaska and Massachusetts; found throughout the Aleutian Islands; 0–276 m.

Margarites hickmanae McLean, 1984.
Margarites beringensis: Dall 1925 (non *Valvatella beringensis* E. A. Smith 1889).
Type locality: Petrel Bank (near Semisopochnoi Island, Rat Islands, Aleutian Islands), Bering Sea, Alaska. Distribution: Known only from type locality; low tide to 99 m; rare.

Margarites olivaceus marginatus Dall, 1919. Western olive margarite.
Margarites marginatus Dall 1919.
Type locality: Adak Island, Aleutian Islands. Distribution: Alaska to Washington; Japan; 2–136 m.

Margarites pribilofensis Dall, 1919.
Type locality: Near the Pribilof Islands, Bering Sea. Distribution: Eastern Bering Sea; Arctic Alaska and Arctic Canada; type material was collected at 62 m.

Margarites pupillus (Gould, 1849). Puppet or little margarite.
Type locality: New Zealand. Distribution: Bering Sea to San Diego, California; in the eastern Aleutian Islands as far west as Umnak Island; New Zealand; to a depth of 300 m; common.

Margarites rhodia Dall, 1921. Pacific rosy margarite.
Margarita inflata Carpenter 1864, 1865 (in part); *Margarites papilla* Gould, Dall 1871; *Margarites (Pupillaria) rhodia* Dall 1921; *Pupillaria rhodia* (Dall 1921).
Type locality: Neah Bay, Washington. Distribution: Port Althorp, Alaska, to San Diego, California; depth unknown.

Margarites vahlii (Møller, 1842).
Margarita vahlii Møller 1842; *Margarites hypolispus* Dall 1919.
Type locality: Greenland. Distribution: Circumpolar Arctic; Bering Sea; Japan; Greenland to the Gulf of Maine; 1–930 m.

Margarites vorticifer (Dall, 1873). Vortex margarite.
Type locality: Iliuliuk Harbor, Captain's Bay, Unalaska; Akutan Pass, Alaska. Distribution: Pacific-boreal, including Chukchi Sea south throughout the Aleutian Islands; Sea of Japan; 5–120 m.

Family Calliostomatidae

Calliostoma annulatum (Martyn, 1784). Ringed or purple-ring topsnail.
Trochus annulatus Martyn 1784; *Zizphinus annulatus* (Martyn 1784).
Type locality: Not specified. Distribution: Forrester Island, Southeast Alaska, to Isla San Geronimo, Baja California; intertidal zone to 42 m; common.

Calliostoma canaliculatum (Lightfoot, 1786). Channeled topsnail.
Trochus annulatus Lightfoot 1786.
Type locality: Not specified. Distribution: Eastern Bering Sea to northern Mexico; intertidal zone to 25 m.

Calliostoma ligatum (Gould, 1849). Blue topsnail.
Calliostoma costatum Carpenter 1864.
Type locality: Not traced. Distribution: Eastern Bering Sea to southern California; intertidal zone to 30 m.

Calliostoma platinum Dall, 1890. Silvery topsnail.
Type locality: Near Santa Barbara Islands, California. Distribution: Gulf of Alaska to southern California; 180–700 m.

?***Calliostoma titanium*** McLean, 1984. Beaded white top.
Type locality: Santa Catalina Island, California. Distribution: ?Guf of Alaska to California; type material was collected at 256–274 m; rare.

Calliostoma variegatum Carpenter, 1864. Variegate topsnail.
Type locality: Puget Sound, Washington. Distribution: Forrester Island, Southeast Alaska, to Isla Cedros, Baja California; 10–60 m; uncommon.

Otukaia kiheiziebisu (Otuka, 1939). Bering Sea top shell.
Calliostoma kiheiziebisu Otuka 1939; *Otukaia ikukoae* Sakurai 1994.

Type locality: Japan. Distribution: Eastern Bering Sea to Japan; below 900 m; rare.

Xeniostoma inexpectans McLean, 2012.

Type locality: West of Kiska Island, Rat Islands, Aleutian Islands, Alaska. Distribution: Western Aleutian Islands, from Buldir Island toward the west, to Semisopochnoi Island toward the east; 219–384 m.

Remarks: This species is associated with vase-shaped hexactinellid sponges of the family Rossellidae (McLean, 2012).

Family Solariellidae

Solariella micraulax McLean, 1964. Fine-groove solarelle.

Type locality: Southeast of the Alaska Peninsula. Distribution: Aleutian Islands; southern Alaska; 25–201 m (type material collected at 201 m).

Remarks: Abbott (1974) considered that this species might be a rounded, smoothish form of *S. obscura*.

Solariella nuda Dall, 1896. Naked solarelle.

Type locality: Baja California. Distribution: Gulf of Alaska to Baja California; 400–1000+ m.

Solariella obscura (Couthouy, 1838). Obscure solarelle.

Trochus obscurus Couthouy 1838; *Margarita obscura* (Couthouy 1838); *Machaeroplax obscura* (Couthouy 1838); *Solariella laevis* Friele 1886; *Solariella lewisae* Willett 1946.

Type locality: From stomachs of fishes taken between Marblehead and Nahant, Massachusetts. Distribution: Arctic Seas to Washington and Chesapeake Bay, Virginia; Norway; Finnmark; Spitzberg; Kara Sea; Siberia; 3–732 m; common.

Solariella peramabilis Carpenter, 1864. Lovely solarelle.

Solariella rhyssa Dall 1919.

Type locality: Santa Catalina Island, California. Distribution: Forrester Island, Southeast Alaska, to Isla Clarion, Islas Revillagigedos Islands, Mexico; 50–350 m; common.

Solariella varicosa (Mighels and Adams, 1842). Varicose solarelle.

Margarita varicosa Mighels and Adams 1842; *Machaeroplax varicosa* (Mighels and Adams 1842); *Margarita elegantissima* Wood 1848; *Margarita paupercula* Dall 1919.

Type locality: Chaleur Bay, Gulf of St. Lawrence, Quebec (eastern Canada). Distribution: Alaska to San Diego; Labrador to Gulf of Maine; Europe; 0–350 m; moderately common.

Superfamily Turbinoidea

Family Turbinidae

Homalopoma lacunatum (Carpenter, 1864).

Gibbula lacunata Carpenter 1864; *Margarites (Lirularia) lacunata* (Carpenter 1864); *Margarites lacunatus* (Carpenter 1864); *Homalopoma engbergi* (Willett 1929).

Type locality: Neah Bay, Washington. Distribution: Southern Alaska to Washington; littoral zone.

Homalopoma luridum (Dall, 1885). Dark dwarf-turban.

Leptothyra lurida Dall 1885; *Homalopoma carpenteri* (Pilsbry 1888); *Homalopoma juanensis* (Dall 1919).

Type locality: Puget Sound, Washington. Distribution: Southern Alaska to Baja California; intertidal and subtidal zones; common.

Leptogyra alaskana Bartsch, 1910.

Type locality: Port Graham, Cook's Inlet, Alaska. Distribution: Known only from type locality; depth unknown; rare.

Moelleria costulata (Møller, 1842). Ribbed moelleria.

Turritella costulata Møller 1842.

Type locality: Greenland. Distribution: Arctic seas to Gulf of Alaska throughout the Aleutian Islands and New England; 7–1943 m.

Pomaulax gibberosus (Dillwyn, 1817). Red turban.

Trochus gibberosus Dillwyn 1817; *Lithopoma gibberosa* (Dillwyn 1817); *Astraea gibberosa* (Dillwyn 1817); *Turbo ochraceus* Philippi 1846; *Turbo diadematus* Valenciennes 1846; *Turbo rutilus* C. B. Adams 1852; *Astraea magdalena* Dall 1910; *Astraea lithophorum* Dall 1910; *Astraea montereyensis* Oldroyd 1927; *Astraea guadalupeana* S. S. Berry 1957.

Type locality: Coasts of New Zealand. Distribution: Southern Alaska to northern Mexico; intertidal zone to 80 m.

Spiromoelleria kachemakensis Baxter and McLean, 1984.

Type locality: Northwestern side of Hesketh Island, Kachemak Bay, Cook Inlet, Alaska. Distribution: Aleutian Islands and southern Alaska to British Columbia; 9 m.

Spiromoelleria quadrae (Dall, 1897).

Moelleria quadrae Dall 1897; *Moelleria drusiana* Dall 1919.

Type locality: Cumshewa Inlet, British Columbia. Distribution: Throughout the Aleutian Islands and southern Alaska to British Columbia; intertidal to offshore.

Tegula pulligo (Gmelin, 1791). Dusky turban.

Tegula marcida (Gould 1853); *Tegula pulligo taylori* Oldroyd 1925.

Type locality: Not specified. Distribution: Southern Alaska to northern Mexico; intertidal zone to 3 m; moderately common.

Superfamily Seguenzioidea

Family Chilodontidae

Bathybembix bairdii (Dall, 1889). Baird's spiny top.
Turcicula bairdii Dall 1889; *Lischkeia bairdii* (Dall 1889).
Type locality: Bering Sea, northwest of Unimak Island. Distribution: Eastern Bering Sea to Coronado Islands, Mexico, and off Chile; 18–1097 m; moderately common.

?Calliotropis carlotta (Dall, 1889). Charlotte Island spiny margarite.
Type locality: Queen Charlotte Islands, British Columbia. Distribution: ?Gulf of Alaska to Oregon; 1000–2000 m.

Cidarina cidaris (Carpenter, 1864). Adams' spiny margarite.
Margarita cidaris Carpenter 1864; *Lischkeia cidaris* (Carpenter 1864).
Type locality: Neah Bay, Washington. Distribution: Prince William Sound through the Gulf of Alaska to Isla Cedros, Baja California; 30–300 m.

Clade Cocculiniformia

Superfamily Cocculinoidea

Family Cocculinidae

Cocculina agassizii Dall, 1908.
Type locality: Gulf of Panama. Distribution: Southern Alaska to Panama; 256–1017 m.

Cocculina casanica Dall, 1919.
Type locality: Kasaan Bay. Distribution: Known only from type locality and Stephens Passage, Alaska; 174–293 m; rare.

Clades Caenogastropoda, Hypsogastropoda, Littorinimorpha

Superfamily Littorinoidea

Family Littorinidae

Aquilonaria turneri Dall, 1886.
Type locality: Not traced. Distribution: Bering Strait; eastern Chukchi Sea; Labrador; depth unknown.

Lacuna carinata Gould, 1848. Carinate lacuna.
Type locality: Puget Sound, Washington. Distribution: Alaska to Monterey, California; common on kelp and eel-grass.

Lacuna crassior (Montagu, 1803). Thick lacuna.
Turbo crassior Montagu 1803; *Lacuna glacialis* Möller 1842.
Type locality: Great Britain. Distribution: Alaska; Greenland to Quebec; eastern North Atlantic; 2–175 m.

Lacuna marmorata Dall, 1919. Chink snail.
Type locality: Monterey, California. Distribution: Saginaw Bay, Alaska to San Diego, California; littoral zone.

Lacuna porrecta Carpenter, 1864.
Type locality: Neah Bay, Washington. Distribution: Eastern Bering Sea to San Diego, California; throughout the Aleutian Islands; Commander Islands; 0–36 m; littoral zone.

Lacuna variegata Carpenter, 1864. Variegate lacuna.
Type locality: Neah Bay, Washington. Distribution: Drier Bay, Alaska, to Santa Monica, California; intertidal to shallow subtidal zones; moderately common in eel-grass.

Lacuna vincta (Montagu, 1803). Common northern or wide lacuna.
Epheria vincta (Montagu 1803); *Trochus divaricatus* Fabricius 1780.
Type locality: Salcomb Bay, England. Distribution: Circumboreal; Norton Sound, Alaska, to Santa Barbara, California; Arctic Ocean to Rhode Island; intertidal zone to 46 m; common.

Littorina aleutica Dall, 1872.
Type locality: Gull Rocks, Akutan Pass, Aleutian Islands. Distribution: Pribilof Islands, Bering Sea, and throughout the Aleutian Islands; northern Kuril Islands; intertidal zone.

Littorina scutulata Gould, 1849. Checkered periwinkle.
Type locality: Puget Sound, Washington. Distribution: Eastern Bering Sea to northern Mexico; intertidal zone.

Littorina sitkana Philippi, 1846. Sitka periwinkle.
Littorina sitchana (Philippi 1846); *Littorina cincta* Gould 1847; *Littorina kurila* Middendorff 1848; *Littorina subtenebrosa* Middendorff 1848; *Littorina castanea* A. Adams and Reeve 1850; *Littorina sulcata* Carpenter 1864; *Littorina gouldiana* Weinkauff 1882; *Littorina atkana* Dall 1886; *Littorina sitchensis* Nevill 1885.
Type locality: Sitka, Alaska. Distribution: Eastern Bering Sea to Puget Sound, Washington; throughout the Aleutian Islands; Japan; Siberia; 0–40 m; common.

Littorina subrotundata (Carpenter, 1864).
Assiminiea subrotundata Carpenter 1864; *Paludinella newcombiana* Hemphill 1877; *Algamorda newcombiana* (Hemphill 1877); *Littorina subrotundata kurila* Boulding 1990.
Type locality: Neah Bay, Washington. Distribution: Throughout the Aleutian Islands; southern Alaska to Washington; intertidal zone.

Superfamily Rissooidea

Family Rissoidae

Alvania compacta (Carpenter, 1864). Compact alvania.

Rissoa compacta Carpenter 1864; *Rissoa acutelirata* Carpenter 1864; *Alvania filosa* Carpenter 1864; *Alvania fossilis* Bartsch 1911; *Alvania iliuliukensis* Bartsch 1911; *Alvania pedroana* Bartsch 1911.

Type locality: Puget Sound, Washington. Distribution: Port Etches, Alaska, to Baja California, Mexico; low tide to 183 m; common.

Alvania rosana Bartsch, 1911. Santa Rosa alvania.

Alvania burradensis Bartsch 1921.

Type locality: Santa Rosa Island, California. Distribution: Kachemak Bay, Alaska, to Punta San Pablo, Baja California Sur; 20–300 m; common.

Boreocingula katherinae (Bartsch, 1912).

Cingula katherinae Bartsch 1912.

Type locality: Windfall Harbor, Admiralty Island, Alaska. Distribution: Throughout the Aleutian Islands to Queen Charlotte Island, British Columbia; depth unknown.

Remarks: Some authors (e.g. Ponder, 1985) believed this is a junior synonym of *B. martyni* (Dall 1886).

Boreocingula martyni (Dall, 1886).

Cingula robusta martyni Dall 1886.

Type locality: Kiska Harbor, Aleutian Islands. Distribution: Aleutian Islands to Korovia Bay, Alaska; East Siberian and Chukchi seas; to a depth of 30 m.

Cingula scipio Dall, 1887.

Cingula robusta scipio Dall 1887.

Type locality: Aleutian Islands. Distribution: Pribilof and Aleutian Islands to Middleton Island, Alaska; depth unknown.

Frigidoalvania janmayeni (Friele, 1878). Jan Mayen alvania.

Rissoa janmayeni Friele 1878; *Alvania janmayeni* (Friele 1878).

Type locality: Jan Mayen, Norway. Distribution: Circumpolar in the Arctic; Bering Sea; northern Sea of Japan; North Atlantic south to New England; 8–891 m.

Onoba aurivillii (Dall, 1887).

Alvania aurivillii Dall 1887.

Type locality: Adak Island, Alaska. Distribution: Kiska to Adak Island, Aleutian Islands; depth unknown.

Onoba bakeri (Bartsch, 1910).

Alvania bakeri Bartsch 1910.

Type locality: Port Graham, Cook's Inlet, Alaska. Distribution: Throughout the Aleutian Islands and southern Alaska; shallow water.

Onoba carpenteri (Weinkauff, 1885).

Alvania reticulata Carpenter 1864; *Alvania carpenteri* Weinkauff 1885; *Alvania montereyensis* Bartsch 1911; *Alvania sanjuanensis* Bartsch 1920; *Cingula eyerdami* Willett 1934; *Alvania keenae* Gordon 1939.

Type locality: Neah Bay, Washington. Distribution: Forrester Island, Alaska to Monterey, California; depth unknown.

Onoba castanella (Dall, 1886).

Alvania castanella Dall 1886.

Type locality: Atka Island, Alaska. Distribution: Kiska Island to Atka Island, Aleutian Islands; depth unknown.

Onoba cerinella Dall, 1886.

Cingula cerinella (Dall 1886); *Onoba asser* Bartsch 1910.

Type locality: Atka Island, Aleutian Islands. Distribution: Throughout the Aleutian Islands and southern Alaska; intertidal and shallow subtidal zones.

Onoba dalli (Bartsch, 1927).

Alvania dalli Bartsch 1927.

Type locality: Shuyak Straits, Afognak Island, Alaska. Distribution: Kodiak Archipelago and southern Alaska to California; intertidal and subtidal zones.

Onoba forresterensis (Willett, 1934).

Cingula forresterensis Willett 1934.

Type locality: Forrester Island, Alaska. Distribution: Known only from type locality; rare.

Remarks: Ponder (1985) questionably indicated that this might be a junior synonym of *O. cerinella* Dall, 1886.

Onoba kyskensis (Bartsch, 1911).

Nodulus kyskensis Bartsch 1911; *Cingula kyskensis* (Bartsch 1911).

Type locality: Kiska Harbor, Aleutian Islands. Distribution: Throughout the Aleutian Islands; middle and North Kuril Islands; 0–20 m.

Onoba mighelsi (Stimpson, 1851).

Alvania mighelsi Stimpson 1851; *Cingula alaskana* Bartsch 1912; *Alvania dinora* Bartsch 1917.

Type locality: New England. Distribution: Eastern Bering Sea to southern Alaska; western North Pacific; North Atlantic; 2–140 m.

Onoba moerchi (Collin, 1886).

Cingula moerchi Collin 1886.

Type locality: Kara Sea. Distribution: Arctic; circumpolar; 7–170 m.

Onoba muriei (Bartsch and Rehder, 1939). Muriel's anabathron.

Anabarthron muriei Bartsch and Rehder 1939.

Type locality: Aleutian Islands. Distribution: Known only from type locality; offshore; rare.

Remarks: Some authors (e. g., Ponder, 1985) believe this species might be a junior synonym of O. *bakeri* (Bartsch 1910).

Onoba palmeri (Dall, 1919).

Cingula palmeri (Dall 1919).

Type locality: St. Paul Island, Bering Sea. Distribution: Pribilof Islands, Bering Sea; depth unknown.

Remarks: Some authors believe this species is a junior synonym of O. *kyskensis* (Bartsch 1911).

Onoba verrilli (Friele, 1886).

Rissoa verrilli Friele 1886; *Alvania karlini* Clarke 1963.

Type locality: Norwegian North Atlantic. Distribution: North of Bering Strait; Barents and Kara seas; 180–1200 m.

Schwartziella newcombei (Dall, 1897).

Rissoina newcombei Dall 1897.

Type locality: Cumshewa Inlet, British Columbia. Distribution: Forrester Island, Alaska, to Monterey, California; depth unknown.

Family Barleeiidae

Barleeia haliotiphila Carpenter, 1864. Abalone barleysnail.

Barleeia oldroydae (Bartsch 1911); *Barleeia californica* Bartsch 1920; *Barleeia sanjuanensis* Bartsch 1920.

Type locality: Lower California. Distribution: Southern Alaska to Mexico; shallow water.

Barleeia subtenuis Carpenter, 1864. Carpenter's or fragile barleysnail.

Barleeia rimata Carpenter 1864; *Barleeia coronadoensis* Bartsch 1920; *Barleeia sanjuanensis* Bartsch 1920.

Type locality: San Diego, California. Distribution: Southern Alaska to Baja California; shallow, sublittoral waters; moderately common.

Pseudodiala acuta (Carpenter, 1864). Acute barleysnail.

Diala acuta Carpenter 1864; *Barleei marmoreal* (Carpenter 1864); *Litiopa acuta*: Tryon 1886; *Barleeia acuta*: Baker 1902; *Barleei dalli* Bartsch 1920; ?*Barleei bentleyi* Bartsch 1920.

Type locality: Catalina Island, California. Distribution: Southern Alaska to Baja California; shallow water; uncommon.

Family Falsicingulidae

Falsicingula aleutica (Dall, 1887).

Cingula aleutica Dall 1887; *Onoba aleutica* (Dall 1887).

Type locality: Bering Sea. Distribution: Pribilof Islands to southern Alaska; depth unknown.

Family Caecidae

Caecum crebricinctum Carpenter, 1864. Manynamed caecum.

Micranellum crebricinctum (Carpenter 1864); *Caecum pedroense* Bartsch 1920; *Caecum barkleyense* Bartsch 1920; *Micranellum oregonensis* Bartsch 1920; *Micranellum profundicolum* Bartsch 1920.

Type locality: San Diego, California. Distribution: Southern Alaska to Baja California; to a depth of approximately 35 m; common.

Caecum occidentale (Bartsch, 1920). Western caecum.

Fartulum occidentale Bartsch 1920; *Fartulum hemphilli* Bartsch 1920; *Caecum bakeri* Bartsch 1920.

Type locality: San Pedro, California. Distribution: Alaska to Baja California; shallow water; common.

Superfamily Vermetoidea

Family Vermetidae

Serpulorbis squamiger (Carpenter, 1856). Scaled worm-shell.

Aletes squamigerus Carpenter 1856.

Type locality: Santa Barbara, California. Distribution: Southern Alaska to Peru; below the low water line; common.

Superfamily Capuloidea

Family Capulidae

Ariadnaria densecostata Golikov, 1986.

Type locality: Northern Bering Sea. Distribution: Bering and southern Chukchi seas; 19–50 m.

Neoiphinoe arctica (Middendorff, 1849).

Cancellaria arctica Middendorff 1849; *Iphinoe solida*: Golikov 1995, Egorov and Alexeyev 1998 (non Aurivillius 1885).

Type locality: Bering Strait. Distribution: Barents and Siberian seas; eastern Kamchatka; North Kuril Islands; 24–150 m.

Neoiphinoe coronata (Gould, 1860). Crowned hairysnail.

Trichotropis coronata Gould 1860; *Iphinoe coronata* (Gould 1860).

Type locality: Straits of Semiavine, Arctic Ocean. Distribution: Arctic Ocean and Bering Sea; 7–385 m.

Neoiphinoe echinata (Egorov and Alexeyev, 1998).

Iphinoe echinata Egorov and Alexeyev 1998.

Type locality: Russia. Distribution: Chukchi Sea; depth unknown.

Neoiphinoe kroeyeri (Philippi, 1849). Kroyer's hairysnail.

Trichotropis kroyeri Philippi 1849; *Iphinopsis kroyeri* (Philippi 1849); *Iphinoe kroyeri* (Philippi 1849).

Type locality: Spitsbergen. Distribution: Arctic Ocean; eastern Bering Sea to the Shumagin Islands, Alaska;

Japan; northern Europe; Barents, Kara, and Laptev seas; 22–150 m.

Neoiphinoe permabilis (Dall, 1871).
Iphinoe permabilis Dall 1871.
Type locality: North Harbor, Unga Island, Shumagin Islands, Aleutian Islands. Distribution: Bering Sea to the western Gulf of Alaska; 20–100 m.

Torellia vallonia Dall, 1919. Acorn hairysnail.
Type locality: Nazan Bay, Atka Island, Aleutian Islands. Distribution: Aleutian Islands and southern Alaska; type material collected at 26 m.

Trichotropis bicarinata (G. B. Sowerby I, 1825). Two-keeled hairysnail.
Turbo bicarinatus G. B. Sowerby I 1825; *Trichotropis sowerbiensis* Lesson 1832; *Trichotropis tenuis* Smith 1877.
Type locality: Newfoundland. Distribution: Point Barrow, Alaska, south to Nunivak Island and northern Japan; Greenland; Icy Cape; Arctic Ocean, north of Svalbard; Arctic Canada; 0–500 m; moderately common just offshore.

Trichotropis borealis Broderip and G. B. Sowerby I, 1829. Boreal or northern hairysnail.
Ariadnaria borealis (Broderip and G. B. Sowerby I 1829); *Trichotropis costellata* Couthouy 1838; *Trichotropis atlantica* Möller 1842; *Trichotropis conica* Möller 1842; *Trichotropis inermis* Hinds 1877; *Trichotropis saintjohnensis* Verkrüzen 1877.
Type locality: Melville Island (Arctic Canada). Distribution: Point Barrow, Alaska, to British Columbia; Arctic Canada; Greenland to New England; Iceland; Faroe Islands; British Isles; Norway; Svalbard; Kara Sea; 5–944 m; common.

Trichotropis cancellata Hinds, 1843. Cancellate hairysnail.
Turritropis cancellata (Hinds 1843).
Type locality: Sitka, Alaska. Distribution: Eastern Bering Sea to Oregon; throughout the Aleutian Islands; intertidal zone to 200 m; common.

Trichotropis insignis Middendorff, 1849. Gray hairysnail.
Ariadnaria insignis (Middendorff 1849).
Type locality: Bering Strait. Distribution: Northern Alaska south throughout the Aleutian Islands and Cook's Inlet, Alaska; Japan; offshore; uncommon.

Superfamily Calyptraeoidea

Family Calyptraeidae

Calyptraea fastigiata Gould, 1846. Pacific Chinese hat or cup-and-saucer snail.
Calyptraea mamillaris Broderip 1834; *Calyptraea contorta* Carpenter 1864.
Type locality: Puget Sound, Washington. Distribution: Southern Alaska to southern California; intertidal zone to 137 m; moderately common.

Crepidula nummaria Gould, 1846. Western or Northern white slippersnail.
Crepidula minuta Middendorff 1849; *Crypta unguiculus* H. Adams and A. Adams 1858; *Crepidula navicelloides* Carpenter 1864; *Crepidula nivea* var. *glottidiarum* Dall 1905.
Type locality: Classet, Strait of Juan de Fuca. Distribution: Bering Strait to Mexico; intertidal and subtidal zones; common.

Crepidula perforans (Valenciennes, 1846). White slippersnail.
Crepidula explanata Gould 1853; *Crepidula exuviata* Reeve 1859; *Crepidula fimbriata* Reeve 1859.
Type locality: Not specified. Distribution: Eastern Bering Sea to Panama; littoral zone.

Crepipatella dorsata (Broderip, 1834). Pacific half-slippersnail.
Calyptraea dorsata Broderip 1834; *Crepidula lingulata* Gould 1846; *Crepidula bilobata* "Gray" Reeve 1859; *Crepidula fissurata* Sowerby 1883; *Crepipatella lingulata*: Keen 1971, Abbott 1974, McLean 1978; *Crepidula dorsata*: Hoagland 1977.
Type locality: Santa Elena, Ecuador. Distribution: Bering Sea, Alaska to Peru; intertidal zone to 100 m; abundant from the intertidal zone to 20 m, less common in deeper water.

Crepipatella orbiculata (Dall, 1919). Round slippersnail.
Crepidula orbiculata Dall 1919; *Verticumbo charybdis* Berry 1940; *Crepipatella (Verticumbo) charybdis*: Abbot 1974.
Type locality: Victoria, Vancouver Island, British Columbia. Distribution: Bering Sea, Alaska, to San Diego, California; 100–2100 m; uncommon.

Grandicrepidula grandis (Middendorff, 1849). Great or grand slippersnail.
Crepidula grandis Middendorff 1849.
Type locality: St. Paul Island, Bering Sea. Distribution: Arctic Ocean south to Gulf of Alaska; throughout the Aleutian Islands; ?Kamchatka; intertidal zone to 230 m.

Superfamily Velutinoidea

Family Velutinidae

Cartilagovelutina beringensis (Derjugin, 1950).
Velutina beringensis Derjugin 1950.
Type locality: Northern Bering and Chukchi seas. Distribution: Bering and Chukchi seas; Okhotsk Sea; North Kuril Islands; 50–147 m

Ciliatovelutina lanata (Derjugin, 1950).
Velutina lanata Derjugin 1950.
Type locality: South of Bering Strait. Distribution: Bering Sea; Wrangel Island; Okhotsk Sea; South Kuril Islands; depth unknown.

Ciliatovelutina lanigera (Møller, 1842). Wooly lamellaria.

Velutina lanigera Møller 1842.

Type locality: Greenland. Distribution: Chukchi and Beaufort seas to Petrel Bank (near Semisopochnoi Island, Aleutian Islands); Bering Sea; Arctic Canada; Greenland; Iceland; Norway; Svalbard; 7–500 m.

Limneria prolongata (Carpenter, 1864). Elongate lamellaria.

Velutina prolongata Carpenter 1864; *Velutina conica* Dall 1886.

Type locality: Neah Bay, Washington. Distribution: Bering Strait to central California; throughout the Aleutian Islands; northern Japan; intertidal zone to 920 m.

Limneria undata (T. Brown, 1839). Wavy lamellaria or undate velutina.

Velutina undata T. Brown 1839; *Velutina zonata* Gould 1841; *Velutina canaliculata* Kröyer 1847; *Velutina zonata* var. *grandis* E. A. Smith 1877; *Velutina bifasciata* Derjugin 1950; *Velutina ochotensis* Derjugin 1950; *Limneria undata bifasciata* (Derjugin 1950); *Limneria undata ochotensis* (Derjugin 1950).

Type locality: Scotland. Distribution: Point Barrow, Alaska, to Kudobin Islands (southeastern Bering Sea); Arctic Canada and Siberia; Nova Scotia to New England; Greenland; Norway; Svalbard; intertidal zone to 1187 m; uncommon.

Marsenina glabra (Couthouy, 1838).

Oxynoe glabra Couthouy 1838; *Sigaretus groelandicus* Møller 1842; *Lamellaria prodita* Lovén 1846; *Marseninia micromphala* Bergh 1853.

Type locality: Barnstable, Massachusetts Bay. Distribution: Almost circumpolar in the Arctic Ocean; in the Atlantic south to Massachusetts; 32–1232 m.

Marsenina rhombica (Dall, 1871). Rhombic lamellaria or marbled lamellarid.

Lamellaria rhombica Dall 1871.

Type locality: Monterey Bay, California. Distribution: Southern Alaska to Baja California, Mexico; 0–103 m; moderately common.

Marsenina stearnsii (Dall, 1871). Stearn's ear shell.

Lamellaria stearnsii Dall 1871; *Lamellaria stearnsii orbiculata* Dall 1871.

Type locality: Monterey, California. Distribution: Prince William Sound, Alaska to Mexico; intertidal zone to 20 m.

Onchidiopsis brevipes Derjugin, 1937. Spherical blob snail.

Type locality: Chukchi Sea (69°54′N, 171°09′W). Distribution: Chukchi and Bering seas; Aleutian Islands; southern Barents Sea; New Siberian Islands; southern Okhotsk Sea; 8–250 m.

Onchidiopsis carnea Bergh, 1853.

Onchidiopsis latissima Odhner 1913.

Type locality: Spitsbergen. Distribution: Along the entire Arctic coastline; Asian high-boreal waters; 5–500 m.

Onchidiopsis glacialis (M. Sars, 1851). Icy lamellaria or glacial blob snail.

Lamellaria glacialis M. Sars 1851; *Onchidiopsis groenlandica* Bergh 1853.

Type locality: Hemmerfest to Havösond, Norway. Distribution: Point Barrow, Alaska, to Gulf of Alaska; Arctic Canada and Siberia; Greenland; Iceland; Svalbard; Murman Coast to Novaya Zemlya; 4–134 m.

Onchidiopsis hannai Dall, 1916.

Type locality: St. Paul Island, Bering Sea. Distribution: Eastern Bering Sea to southern Alaska; littoral zone.

Onchidiopsis maculata Derjugin, 1937.

Type locality: Peter the Great Bay, Sea of Japan. Distribution: Chukchi Sea; Sea of Japan; Sea of Okhotsk; 5–80 m.

Remarks: There are no published records of this species in Alaskan waters (Gulbin and Golikov, 2001), but Clark[4] identified specimens collected in the eastern Chukchi Sea.

Piliscus commodus (Middendorff, 1851). Widemouth lamellaria.

Pilidium commodum Middendorff 1851; *Capulacmaea commodum* (Middendorff 1851); *Piliscus radiatus* (M. Sars 1851); *Capulus radiatus* (M. Sars 1851); *Capulacmaea radiata* (M. Sars 1851); *Piliscus probus* Lovén 1859.

Type locality: Tugur Bay, Okhotsk Sea. Distribution: Point Barrow, Alaska to southern Alaska; Nova Scotia; Greenland; Iceland; Svalbard; Finmak; Kara Sea; 4–820 m.

Torellivelutina ammonia (Dall, 1919). Ram's horn hairysnail.

Torellia ammonia Dall 1919.

Type locality: Southwest of Sanak Island, Alaska. Distribution: Aleutian Islands; 50–200 m.

Velutina plicatilis (O. F. Müller, 1776). Oblique velutina or ribbed velvet snail.

Helix plicatilis O. F. Müller 1776; *Bulla plicatilis* (O. F. Müller 1776); *Velutella plicatilis* (O. F. Müller 1776); *Helix coriacea* Pallas 1788; *Bulla flexilis* Montagu 1808; *Velutina flexilis* (Montagu 1808); *Velutina cryptospira* Middendorff 1849; *Velutina sitkensis* A. Adams 1853.

Type locality: Denmark and Norway. Distribution: Point Barrow, Alaska, to central California; Arctic Canada and Siberia; Nova Scotia; Newfoundland; Greenland; Great Britain; Norway to Belgium; Svalbard; White Sea; Sea of Okhotsk; 5–377 m; common.

Remarks: Lives on hydroids.

Velutina rubra Willett, 1919. Red velvet snail or lamellaria.

Type locality: Forrester Island, Southeast Alaska. Distribution: Southern Alaska to northern British Columbia; intertidal zone to 20 m.

Velutina schneideri Friele, 1886.

Type locality: Norway. Distribution: Boreal-Arctic; Chukchi, East Siberian, Laptev, Kara, Barents, and Norwegian seas; south to Puget Sound and the northern Kuril Islands in the Pacific; south to Cape Hatteras and Portugal in the North Atlantic; 7–350 m.

Velutina velutina (O. F. Müller, 1776). Smooth velutina or spiral velvet snail.

Bulla velutina O. F. Müller 1776; *Velutina laevigata* (O. F. Müller 1777); *Velutina haliotidea* (Fabricius 1780); *Velutina vulgaris* Fleming 1820; *Velutina capuloidea* Blainville 1824; *Velutina rupicola* Conrad 1831; *Velutina striata* Macgillivray 1843; *Velutina schneideri* Friele 1886.

Type locality: Denmark and Norway. Distribution: Circumpolar, including Arctic Alaska to central California; throughout the Aleutian Islands; Arctic and eastern Canada to Cape Cod; Russian Arctic; Greenland; British Isles; Norway to Portugal; Svalbard; Franz Josef Islands; intertidal zone to 120 m; common.

Superfamily Naticoidea

Family Naticidae

Amauropsis islandica (Gmelin, 1791). Iceland moonsnail.

Nerita islandica Gmelin 1791; *Natica islandica* (Gmelin 1791); *Natica helicoides* Johnston 1835; *Natica canaliculata* Gould 1840; *Natica exulans* Gould 1841; *Natica cornea* Möller 1842; *Natica gouldii* C. B. Adams 1847; ?*Amauropsis purpurea* Dall 1871; *Choristes elegans* Carpenter 1872.

Type locality: Iceland. Distribution: Arctic Seas to eastern Bering Sea in eastern North Pacific and Virginia in western North Atlantic; western North Pacific; 0–1267 m; moderately common.

Amauropsis purpurea Dall, 1871. Purple moon snail.

Type locality: Norton Sound, Alaska. Distribution: Chukchi and Bering seas; 20–100 m.

Remarks: This species is synonymized with *A. islandica* in the World Register of Marine Species (http://www.marinespecies.org) but is listed as valid in the Integrated Taxonomic Information System (ITIS, http://www.itis.gov).

Bulbus fragilis (Leach, 1819). Green or fragile moonsnail.

Natica fragilis Leach 1819; *Natica aperta* Middendorff 1851.

Type locality: Baffin Bay, between Greenland and Canada. Distribution: Icy Cape, Arctic Alaska south to the Aleutian Islands and east to the Shumagin Islands; 50–200 m.

Bulbus smithii T. Brown, 1839.

Ampullina smithii (Brown 1839); *Acrybia smithii* (Brown 1839); *Natica flava* Gould 1839; *Natica aperta* Lovén 1847; *Acrybia glacialis* Thorson 1951.

Type locality: Ardincaple, near Helensburgh, southwestern Scotland. Distribution: Boreal-Arctic; Chukchi, Barents, and Laptev seas; Sea of Okhotsk and northern Kuril Islands; North Atlantic south to New England; 30–6000 m.

Bulbus striatus Golikov and Sirenko, 1983.

Type locality: Point Barrow, Arctic Alaska. Distribution: Arctic Alaskan coast; depth unknown.

Cryptonatica affinis (Gmelin, 1791). Arctic moonsnail.

Natica affinis Gmelin 1791; *Natica clausa* Broderip and G. B. Sowerby I 1829; *Cryptonatica clausa* (Broderip and G. B. Sowerby I 1829).

Type locality: Iceland. Distribution: Northern Alaska to Baja California, Mexico; Siberia; Sea of Japan; Greenland; intertidal zone to 2650 m.

Cryptonatica aleutica (Dall, 1919). Aleutian moonsnail.

Natica aleutica Dall 1919.

Type locality: Unalaska, Aleutian Islands. Distribution: Northern Alaska to southern California; Kamchatka to Japan; intertidal zone to 552 m.

Cryptonatica russa (Gould, 1859). Rusty moonsnail.

Natica russa Gould 1859.

Type locality: Arctic Ocean. Distribution: Chukchi Sea and Bering Strait to California; 10–300 m.

Lunatia lewisii (Gould, 1847). Lewis' moonsnail.

Natica lewisii Gould 1847; *Euspira lewisii* (Gould 1847); *Polinices lewisii* (Gould 1847); *Natica algidus* Gould 1848.

Type locality: Discovery Harbor, Puget Sound, Washington. Distribution: Southern Alaska to Baja California, Mexico; Japan; intertidal zone to 200 m; common.

Lunatia monterona (Dall, 1919).

Euspira monterona Dall 1919.

Type locality: Captain's Bay, Unalaska, Aleutian Islands. Distribution: Chukchi Sea to Prince William Sound; eastern Sakhalin Island; northern Kuril Islands; 37–222 m.

Lunatia pallida (Broderip and G. B. Sowerby I, 1829). Pale northern moonsnail.

Natica pallida Broderip and G. B. Sowerby I 1829; *Polinices pallidus* (Broderip and G. B. Sowerby I 1829); *Euspira pallida* (Broderip and G. B. Sowerby I 1829); *Natica borealis* Gray 1839; *Natica pusilla* Gould 1841; *Natica groenlandica* Möller 1842; *Polinices caurina* Gould 1847; *Euspira canonica*

Dall 1919; *Euspira politiana* Dall 1919; *Neverita politiana* (Dall 1919); *Polinices monterona* Dall 1921; *Lunatia choshiensis* Tiba 1985.

Type locality: Icy Cape, Arctic Ocean. Distribution: Circumpolar; northern Alaska to Baja California; Sea of Japan; intertidal zone to 2430 m.

Lunatia tenuistriata (Dautzenberg and Fischer, 1911).

Natica tenuistriata Dautzenberg and Fischer 1911.

Type locality: Novaya Zemlya, Kostin-Shar. Distribution: Arctic circumpolar; 20–100 m.

Pseudopolinices nanus (Møller, 1842). Tiny moonsnail.

Natica nana Møller 1842; *Polinices nanus* (Møller 1842); *Euspira nana* (Møller 1842); *Neverita nanus* (Møller 1842).

Type locality: Greenland. Distribution: Arctic Ocean to San Diego, California; Aleutian Islands; Greenland to Rhode Island; intertidal zone to 1170 m.

Superfamily Tonnoidea

Family Ranellidae

Fusitriton oregonensis (Redfield, 1846). Oregon triton.

Triton oregonense Redfield 1846; *Argobuccinum oregonensis* (Redfield); *Ranell oregonensis* (Redfield); *Argobuccinum coosense* Dall 1909; *Argobuccinum pacifica* Dall 1909; *Gyrineum corbiculatum* Dall 1909.

Type locality: Straits of Juan de Fuca, Oregon [Territory]. Distribution: North Alaska to Baja California, throughout the Aleutian Islands; Mexico; Japan; Kuril Islands; Kamchatka; intertidal zone to 420 m; common.

Clade Sorbeoconcha

Superfamily Cerithioidea

Family Cerithiidae

Bittium vancouverense Dall and Bartsch, 1910.

Bittium sanjuanensis Batsch 1917; *Bittium chalisae* Bartsch 1917.

Type locality: Ucluelet, Barkley Sound, Vancouver Island, British Columbia. Distribution: Southern Alaska to Washington; littoral zone.

Lirobittium attenuatum (Carpenter, 1864). Slender bittium.

Bittium attenuatum Carpenter 1864; *Bittium esuriens* Carpenter 1864; *Bittium multifilosum* Bartsch 1907; *Bittium catalinense* Bartsch 1907; *Bittium boreale* Bartsch 1911; *Bittium latifilosum* Bartsch 1911.

Type locality: Monterey, California, or Neah Bay, Washington. Distribution: Southern Alaska to Baja California; intertidal zone to 70 m; common.

Lirobittium munitum (Carpenter, 1864).

Cerithiopsis munita Carpenter 1864; *Bittium (Lirobittium) munitum* (Carpenter); *Bittium munitoide* Bartsch 1911.

Type locality: Neah Bay, Washington. Distribution: Southern Alaska to southern California; shallow water.

Stylidium eschrichtii (Middendorff, 1849). Giant Pacific Coast or threaded bittium.

Bittium eschrichtii Middendorff 1849; *Bittium eschrichtii montereyense* Bartsch 1907; *Bittium icelum* Bartsch 1911.

Type locality: Sitka, Alaska. Distribution: Southeast Alaska to Baja California; littoral zone; common.

Family Turritellidae

Tachyrhynchus erosus (Couthouy, 1838). Eroded turret shell.

Turritella erosa Couthouy 1838; *Turritella polaris* Möller 1842; *Tachyrhynchus erosus* var. *major* Dall 1919; *Tachyrhynchus Spitsbergensis* Golikov 1986.

Type locality: Massachusetts Bay. Distribution: Circumpolar; Alaskan, Canadian, and Russian Arctic to the Bering Sea and Aleutian Islands; Japan; Labrador to New England; western and eastern Greenland; Svalbard; 12–1530 m; common.

Tachyrhynchus lacteolus (Carpenter, 1864). Milky turret shell.

Masalia lacteolus Carpenter 1864; *Tachyrhynchus reticulatus lacteolus* (Carpenter 1864); *Tachyrhynchus subplanatus* (Carpenter 1865).

Type locality: Puget Sound, Washington. Distribution: Southern Alaska to Baja California; 27–200 m; uncommon.

Tachyrhynchus pratomus Dall, 1919.

Type locality: Semidi Islands, Alaska. Distribution: Semidi Islands to Baja California; 37 m.

Tachyrhynchus reticulatus (Mighels and Adams, 1842).

Turritella reticulata Mighels and Adams 1842; *Turritella areolata* Stimpson 1851; *Alvania areolata* (Stimpson 1851); *Turritella erosa* var. *costata* Aurivillius 1885; *Turritella reticulata* var. *laevior* Knipowitsch 1902.

Type locality: Bay Chaleur, Gulf of St. Lawrence, Quebec. Distribution: Arctic Alaska and Canada; Bering Sea; Aleutian Islands; British Columbia; Labrador to New England; western and eastern Greenland; Svalbard; 3–404 m; common.

Tachyrhynchus spitsbergensis Golikov, 1986.

Type locality: Spitsbergen. Distribution: Circumpolar in Arctic, Bering Sea; 18–295 m.

Superfamily Triphoroidea

Family Cerithiopsidae

Cerithiopsis charlottensis Bartsch, 1917.

Cerithiopsis fraseri Bartsch 1921.

Type locality: Queen Charlotte Sound, British Columbia. Distribution: Southern Alaska to Washington; littoral zone.

Cerithiopsis columna Carpenter, 1864.

Cerithiopsis willetti Bartsch 1921.

Type locality: Neah Bay, Washington. Distribution: Southern Alaska to Baja California; littoral zone.

Cerithiopsis onealensis Bartsch, 1921.

Type locality: O'Neal Island, San Juan Islands, Puget Sound, Washington. Distribution: Southern Alaska to Washington; type material collected at 46 m.

Cerithiopsis stejnegeri Dall, 1884.

Cerithiopsis truncata Dall 1887; *Cerithiopsis dina* Bartsch 1911.

Type locality: Sitka, Alaska. Distribution: Eastern Bering Sea and throughout the Aleutian Islands to Washington; shallow water.

Cerithiopsis stephensae Bartsch, 1909.

Type locality: Bear Bay, Baranoff Island, Alaska. Distribution: Port Frederick, Alaska to Puget Sound, Washington; 27–46 m.

Superfamily Epitonioidea

Family Epitoniidae

Acirsa borealis (Lyell, 1841). Northern white or chalky wentletrap.

Scalaria borealis Lyell 1841; *Epitonium borealis* (Lyell 1841); *Turritella costulata* Mighels and Adams 1842 (non Borson 1825); *Acirsa costulata* (Mighels and Adams 1842); *Turritella eschrichti* Hölböll in Möller 1842; *Scalaria eschrichti* Moller 1842; *Scalaria undulata* G. B. Sowerby II 1844; *Cirsotrema undulata* (G. B. Sowerby II 1844); *Scalaria gouldi* Tapparone-Canefri 1876; *Scalaria arctica* Posselt and Jensen 1898.

Type locality: Gulf of St. Lawrence, Quebec, Canada. Distribution: Circumboreal, including the Aleutian Islands; offshore to a depth of 91 m; uncommon.

Acirsa mcleani Sirenko, 2009.

Type locality: Chukchi Sea. Distribution: Southeastern Chukchi Sea; northern Bering and Okhotsk seas; 35–144 m.

Boreoscala greenlandica (Perry, 1811). Greenland wentletrap.

Scalaria greenlandica Perry 1811; *Epitonium greenlandicum* (Perry 1811); *Scalaria similis* Sowerby 1813; *Scalaria planicosta* Kiener 1838; *Boreoscala planicosta* (Kiener 1838); *Scalaria subulata* Couthouy 1838; *Boreoscala subulata* (Couthouy 1838); *Scalaria greenlandica* var. *crebricostata* G. O. Sars 1878; *Scalaria angustior* Kobelt 1888; *Scalaria greenlandica* var. *major* Kobelt 1888; *Scalaria greenlandica* var. *ornata* Kobelt 1888; *Epitonium greenlandicum norvegicum* Clench and Turner 1952; *Scalaria lovenii* A. Adams 1856; *Epitonium greenlandicum japonicum* Shikama 1962.

Type locality: Greenland. Distribution: Circumboreal, including Point Barrow, Alaska, to British Columbia; Japan; Greenland to Long Island, New York; 18–238 m; common.

Epitonium caamanoi Dall and Bartsch, 1910. Tabulate wentletrap.

Nitidiscala caamanoi (Dall and Bartsch 1910); *Epitonium densiclathratum* Dall 1917.

Type locality: Barkley Sound, Vancouver Island, British Columbia. Distribution: Southern Alaska to southern California; littoral and shallow subtidal zones.

Epitonium hindsii (Carpenter, 1856).

Scalaria hindsii Carpenter 1856; *Nitidiscala hindsii* (Carpenter 1856); *Epitonium compradora* Dall 1917; *Epitonium cylindricum* Dall 1917; *Nitidiscala cylindrica* (Dall 1917); *Epitonium musidorum* Dall 1917; *Nitidiscala musidora* (Dall 1917); *Epitonium pazianum* Dall 1917; *Epitonium persuturum* Dall 1917; *Nitidiscala persutura* (Dall 1917); *Epitonium contrerasi* Jordan and Hertlein 1926; *Nitidiscala contrerasi* (Jordan and Hertlein 1926); *Epitonium cooperi* Strong 1930; *Epitonium bakhanstranum* Keen 1962.

Type locality: Panama. Distribution: Forrester Island, Alaska, to Peru; intertidal zone to 195 m.

Epitonium indianorum (Carpenter, 1864). Money wentletrap.

Scalaria indianorum Carpenter 1864; *Nitidiscala indianorum* (Carpenter 1864); *Epitonium columbianum* Dall 1917; *Epitonium montereyensis* Dall 1917 (non *Scala montereyensis* Dall 1907); *Scalaria regiomontana* Dall, *in* DeBoury 1919 (new name for *E. montereyensis* Dall 1917).

Type locality: Neah Bay, Washington. Distribution: Forrester Island, Alaska, to Bahia Todos Santos, Baja California; intertidal zone to 120 m; fairly common offshore.

Epitonium sawinae (Dall, 1903).

Scala sawinae Dall 1903; *Nitidiscala sawinae* (Dall 1903); *Epitonium acrostephanus* Dall 1908; *Epitonium catalinae* Dall 1908; *Epitonium tabulatum* Dall 1917; *Epitonium regime* Dall 1917.

Type locality: Santa Catalina Island, California. Distribution: Southern Alaska to Bahia Magdalena, Baja California; 18–360 m.

Epitonium tinctum (Carpenter, 1864). Tinted wentletrap.

Scalaria indianorum var. *tincta* Carpenter 1864; *Nitidiscala tincta* (Carpenter 1864); *Scalaria subcoronata* Carpenter 1864;

Epitonium fallaciosum Dall 1921; *Nitidiscala eelense* (Durham 1937).

Type locality: San Pedro, California. Distribution: Southern Alaska to Baja California, Mexico; intertidal zone to 45 m; abundant.

Opalia borealis (Gould, 1852). Boreal wentletrap.

Scalaria borealis Gould 1852; *Scala wroblewskyi* Mörch 1875; *Opalia wroblewskyi* (Mörch 1875); *Opalia chacei* Strong 1937; *Opalia borealis chacei* Strong 1937.

Type locality: Puget Sound, Washington. Distribution: In the Aleutian Islands as far west as Adak Island; northern Alaska to Baja California; intertidal zone to 90 m.

Opalia montereyensis (Dall, 1907). Monterey wentletrap.

Epitonium montereyense Dall 1907; *Cirsotrema montereyensis* (Dall 1907); *Scalaria pluricostata* de Boury 1913; *Opalia pluricostata* Dall 1917; *Scala evicta* de Boury 1919; *Opalia evicta* (de Boury 1919).

Type locality: Monterey Bay, California. Distribution: Southern Alaska to Baja California; type material collected at 46 m.

Superfamily Eulimoidea

Family Eulimidae

Asterophila japonica Randall and Heath, 1912.

Type locality: Japan. Distribution: Bering Strait to the Sea of Japan; 14–700 m.

Remarks: This species is parasitic in *Leptasterias*, a sea star.

Entocolax ludwigii Voigt, 1888.

Type locality: Bering Sea. Distribution: Bering Sea; depth unknown.

Remarks: This species is an internal parasite of *Myriotrochus*, a holothurian.

Eulima alaskensis (Bartsch, 1917). Alaska eulima.

Strombiformis alaskensis Bartsch 1917.

Type locality: Dutch Harbor, Unalaska, Aleutian Islands. Distribution: Known only from type locality; littoral zone; rare.

Hypermastus randolphi (Vanatta, 1900).

Eulima randolphi Vanatta 1900; *Melanella californica* Bartsch 1917; *Eulima californica* (Bartsch 1917).

Type locality: Unalaska, Alaska. Distribution: Throughout the Aleutian Islands to Puget Sound, Washington; littoral zone.

Melanella micans (Carpenter, 1864). Carpenter's melanella or shining balcis.

Eulima micans Carpenter 1864; *Balcis micans* (Carpenter 1864); *Melanella mexicana* Bartsch 1917; *Melanella oldroydi* Bartsch 1917; *Balcis comoxensis* (Bartsch 1917); *Melanella tacomaensis* Bartsch 1917.

Type locality: San Pedro, California. Distribution: Central Alaska to Baja California; 2–100 m; common.

Remarks: Presumed to be parasitic on holothurians.

Melanella montereyensis Bartsch, 1917. Monterey eulima.

Melanella (Balcis) montereyensis Bartsch 1917.

Type locality: Monterey, California. Distribution: Southern Alaska to central California; shallow water.

Polygireulima rutila (Carpenter, 1864). Auburn eulima.

Eulima rutila Carpenter 1864; *Melanella rutila* (Carpenter 1864); *Balcis rutila* (Carpenter 1864).

Type locality: Monterey, California. Distribution: Southern Alaska to Baja California; 10–400 m.

Remarks: Associated with various asteroids.

Vitreolina columbiana (Bartsch, 1917). British Columbian balcis.

Melanella (Balcis) columbiana Bartsch 1917; *Balcis columbiana* (Bartsch 1917); *Melanella grippi* Bartsch 1917; *Balcis (Vitreolina) titubans* Berry 1956.

Type locality: Departure Bay, British Columbia. Distribution: Throughout the Aleutian Islands to Isla Cedros, Baja California; intertidal zone to 50 m; common.

Remarks: Associates with the holothurian *Cucumaria frondosa japonica*.

Vitreolina macra (Bartsch, 1917).

Melanella (Balcis) macra Bartsch 1917; *Melanella macra* (Bartsch 1917); *Melanella (Balcis) catalinensis* Bartsch 1917; *Melanella (Balcis) prefalcata* Bartsch 1917; *Balcis (Vitreolina) obstipa* Berry 1954.

Type locality: Departure Bay, British Columbia. Distribution: Kachemak Bay, Alaska, to Islas Coronados, Baja California; 20–100 m.

Remarks: Host unknown.

Clade Neogastropoda

Superfamily Muricoidea

Family Muricidae

Subfamily Ocenebrinae

Nucella canaliculata (Duclos, 1832). Channeled dogwinkle.

Purpura canaliculata Duclos 1832; *Thais canaliculata* (Duclos 1832); *Pupura decemcostata* Middendorff 1849; *Pupura analoga* Forbes 1852; *Thais canaliculata* var. *compressa* Dall 1915.

Type locality: California. Distribution: Throughout the Aleutian Islands east to Sitka and south to Monterey, California; intertidal zone; moderately common.

Nucella emarginata (Deshayes, 1839). Emarginate dogwinkle.

Purpura emarginata Deshayes 1839; *Thais emarginata* (Deshayes 1839); *Nucella conradi* (Reeve 1846); *Nucella ostrina* (Gould 1852); *Nucella emarginata* forma *projecta* (Dall 1915).

Type locality: California. Distribution: Eastern Bering Sea to Mexico; Bering Island; Okhotsk Sea; littoral zone; common.

Nucella lamellosa (Gmelin, 1791). Frilled dogwinkle.

Buccinum lamellosa Gmelin 1791; *Thais lamellosa* (Gmelin 1791); *Murex crispata* Holton 1802; *Polyplex rugosus* Perry 1811; *Murex ferrugineus* Eschscholtz 1829; *Sistrum ferrugineus* (Eschscholtz 1829); *Murex lactuca* Eschscholtz 1829; *Pupura septentrionalis* Reeve 1846; *Purpura plicatus* Martens 1872; *Thais cymica* Dall 1915; *Thais franciscana* Dall 1915; *Thais hormica* Dall 1915; *Thais neptunea* Dall 1915; *Thais sitkana* Dall 1915.

Type locality: Strait between islands of New Zealand ("*In freto novae Seelandiae insulis interjecto*".) Distribution: Eastern Bering Sea to southern California; throughout the Aleutian Islands; Kuril Islands; Kamchatka; intertidal zone to 50 m; common.

Nucella lima (Gmelin, 1791). File dogwinkle.

Murex lima Gmelin 1791; *Thais lima* (Gmelin 1791); *Pupura attenuata* Reeve 1846; *Pupura saxicola* Valenciennes 1846.

Type locality: *Ad Sinum* (China). Distribution: Kotzebue Sound, Arctic Ocean, south through the Bering Sea, the Aleutian and Commander islands, to Baja California; in the west to the Kuril Islands, and northern Japan; intertidal and subtidal zones; common.

Subfamily Trophoninae

Boreotrophon alaskanus Dall, 1902. Alaska trophon.

Trophon alaskanus (Dall 1902); *Boreotrophon ithitomus* (Dall 1902); *Trophonopsis alaskensis* (Dall 1902); *Neptunea ithitoma* Dall 1919; *Boreotrophon ithitomus* (Dall 1919); *Boreotrophon alborostratus* Taki 1938.

Type locality: Bering Sea, north of Unalaska. Distribution: Eastern Bering Sea to northern California; northern Sea of Japan; Okhotsk Sea; Kuril Islands; eastern Kamchatka; western Bering Sea; 54–2743 m.

Boreotrophon avalonensis Dall, 1902. Avalon trophon.

Neptunea callicerata Dall 1919; *Neptunea staphylina* Dall 1919; *Boreotrophon staphylina* (Dall 1919); *Trophonopsis staphylina* (Dall 1919).

Type locality: Avalon, Santa Catalina Island, California. Distribution: Southeast Alaska to Baja California, Mexico; 80–270 m; moderately uncommon.

Remarks: We follow the view of McLean and Gosliner (1996) who believed *B. staphylina* is a junior synonym of this species.

Boreotrophon clathratus (Linnaeus, 1767). Clathrate trophon.

Murex clathratus Linnaeus 1767; *Trophon clathratus* (Linnaeus 1767); *Tritonium clathratum* (Linnaeus 1767); *Trophonopsis clathratus* (Linnaeus 1767); *Buccinum lamellatum* Gmelin 1791; *Buccinum lyratum* Gmelin 1791; *Fusus lamellosus* Gray 1839; *Fusus scalariformis* Gould 1840; *Tritonium gunneri* Lovén 1846; *Tritonium clathratus* var. *normalis* Middendorff 1849; *Tritonium clathratus* var. *ventricosa* Middendorff 1849; *Tritonium eliator* Middendorff 1849; *Tritonium rossi* Leach in Mörch 1858; *Trophon clathratus* var. *grandis* Mörch 1869; *Trophon richardsoni* Gray in Mörch 1869; *Trophon cepulus* G. B. Sowerby II 1880; *Boreotrophon cepulus* (G. B. Sowerby II 1880); *Trophon clathratus* var. *intermedius* Verkrüzen 1881; *Trophon clathratus* var. *maximus* Verkrüzen 1881.

Type locality: Icelandic seas. Distribution: Circum-Arctic, including Point Barrow, Alaska to the Aleutian Islands; White, Barents, Kara, Laptev, and East Siberian seas; 0.5–1203 m.

Boreotrophon elegantulus (Dall, 1907). Elegant trophon.

Neptunea elegantulus Dall 1907; *Trophon elegantulus* (Dall 1907); *Trophonopsis elegantula* (Dall 1907).

Type locality: Attu Island, Aleutian Islands. Distribution: Aleutian Islands; Kuril Islands; 60–508 m.

Boreotrophon multicostatus (Eschscholtz, 1829). Ribbed trophon.

Murex multicostatus Eschscholtz 1829; *Trophon multicostatus* (Eschscholtz 1829); *Boreotrophon peregrinus* Dall 1902.

Type locality: Sitka, Alaska. Distribution: Arctic Alaska to southern California; northern Japan; intertidal zone to 40 m.

Remarks: Some researchers considered this species a junior synonym of *B. clathratus* (Abbott, 1974), while others (Baxter, 1987; Turgeon et al., 1998) considered it a valid species.

Boreotrophon orpheus (Gould, 1849). Threaded or corded trophon.

Trophon orpheus Gould 1849; *Ocenebra orpheus* (Gould 1849); *Trophonopsis orpheus* (Gould 1849).

Type locality: Puget Sound, Washington. Distribution: Southern Alaska to southern California; Kuril Islands; subtidal zone to 150 m; moderately common.

Boreotrophon rotundatus Dall, 1902. Rotund trophon.

Type locality: Pribilof Islands, Bering Sea. Distribution: Eastern Bering Sea to the Gulf of Alaska; northern Okhotsk Sea; 40–385 m; rare.

Boreotrophon truncatus (Ström, 1768). Bobtail trophon.

Buccinum truncatum Ström 1768; *Trophon truncatus* (Ström 1768); *Trophonopsis truncata* (Ström 1768); *Trophon truncatus* var. *alba* Jeffreys 1867; *Trophon truncatus* var. *scalaris* Jeffreys 1867; *Trophon truncatus* var. *abbreviata* Mörch

1869; *Boreotrophon beringi* Dall 1902; *Boreotrophon cymatus* Dall 1902; *Boreotrophon pacificus* Dall 1902.

Type locality: Northern Norway. Distribution: Arctic Alaska to Mexico; throughout the Aleutian Islands; Arctic Canada and Siberia; Greenland to New England; Iceland; Faroe Islands; Great Britain; Denmark; Norway; Svalbard; Barents Sea; western North Pacific; 2–950 m.

Ceratostoma foliatum (Gmelin, 1791). Foliated thorn purpura or leafy hornmouth.

Murex foliatus Gmelin 1791; *Purpura foliatum* (Gmelin 1791); *Pterorytis foliatus* (Gmelin 1791); *Triplex pinnata* Perry 1811; *Purpura alata* Schumacher 1817; *Murex monodon* Eschscholtz 1829.

Type locality: Sitka, Alaska. Distribution: Central Alaska to southern California; intertidal zone to 65 m; common.

Nipponotrophon scitulus (Dall, 1891). Spiny or handsome trophon.

Trophon scitulus Dall 1891; *Boreotrophon scitulus* (Dall 1891); *Scabrotrophon scitulus* (Dall 1891); *Trophonopsis scitulus* (Dall 1891).

Type locality: Unalaska Island, Aleutian Islands. Distribution: Pribilof Islands, Alaska, to southern California; 91–457 m; rare.

Nipponotrophon stuarti (E. A. Smith, 1880). Winged or Stuart's trophon.

Trophon stuarti E. A. Smith 1880; *Boreotrophon stuarti* (Smith 1880); *Trophonopsis stuarti* (Smith 1880); *Boreotrophon smithi* Dall 1902; *Boreotrophon macouni* Dall and Bartsch 1910.

Type locality: Vancouver Island, British Columbia. Distribution: Pribilof Islands, Bering Sea, to California; intertidal zone to 100 m; uncommon.

Nodulotrophon coronatus (H. Adams and A. Adams, 1864). Crown trophon.

Trophon coronatus H. Adams and A. Adams 1864; *Boreotrophon coronatus* (Adams and Adams 1864); *Trophon dalli* Kobelt 1878; *Boreotrophon dalli* (Kobelt 1878); *Nodulotrophon dalli* (Kobelt 1878); *Trophon muriciformis* Dall 1886; *Boreotrophon dalli* var. *altus* Dall 1902.

Type locality: New Zealand ("*Novam Seelandiam*"). Distribution: Arctic Ocean to Washington; 40–200 m; uncommon.

Ocenotrophon painei (Dall, 1904). Ribbed rocksnail.

Murex painei Dall 1904; *Tritonalia painei* (Dall 1904); *Ocenebra painei* (Dall 1904).

Type locality: Catalina Island, California. Distribution: Dundas Bay, Alaska, to San Diego, California; 90–183 m; rare.

Ocinebrina interfossa (Carpenter, 1864). Carpenter's dwarf triton or sculptured rocksnail.

Ocenebra interfossa Carpenter 1864; *Tritonalia interfossa* (Carpenter 1864); *Ocenebra atropurpurea* Carpenter 1865; *Ocenebra rubra* Baker 1891; *Tritonalia clathrata* Dall 1919; *Tritonalia minor* Dall 1919; *Tritonalia tracheia* Dall 1919; *Tritonalia interfossa* var. *alpha* Dall 1921.

Type locality: Monterey Bay, California. Distribution: Southern Alaska to Baja California, Mexico; intertidal zone to 100 m. Common.

Ocinebrina lurida (Middendorff, 1848). Lurid dwarf triton or lurid rocksnail.

Tritonium (Fusus) luridum Middendorff 1848; *Ocinebra lurida* (Middendorff 1848); *Urosalpinx lurida* (Middendorff 1848); *Vitularia aspera* Baird 1863; *Ocinebra lurida* var. *munda* Carpenter 1864; *Tritonalia rotunda* Dall 1919; *Tritonalia sclera* Dall 1919; *Tritonalia minor* Dall 1919; *Coralliophilia kincaidi* Dall 1919.

Type locality: Sitka, Alaska. Distribution: Kenai Peninsula, Alaska, to Puerto Santo Tomas, Baja California, Mexico; intertidal zone to 200 m; common.

Scabrotrophon clarki McLean, 1996. Clark's trophon.

Type locality: Monterey, California. Distribution: Aleutian Islands to southern California; 100–350 m; uncommon.

Scabrotrophon densicostatus (Golikov in Golikov and Scarlato, 1985). Densely costate trophon.

Trophonopsis densicostatus Golikov in Golikov and Scarlato 1985.

Type locality: Kuril Islands. Distribution: Western Aleutian Islands and Kuril Islands; 80–250 m.

?Scabrotrophon kamchatkanus (Dall, 1902). Kamchatka trophon.

Boreotrophon kamchatkanus Dall 1902; *Trophonopsis kamchatkanus* (Dall 1902).

Type locality: Southeastern coast of Kamchatka. Distribution: Western Bering Sea; ?eastern Bering Sea and Aleutian Islands; 80–250 m.

Scabrotrophon lasius (Dall, 1919). Sandpaper trophon.

Neptunia (Trophonopsis) lasia Dall 1919; *Nipponotrophon lasius* (Dall 1919); *Trophon lasius* (Dall 1919); *Trophonopsis lasius* (Dall 1919).

Type locality: Point Piños, California. Distribution: Eastern Bering Sea to Baja California, Mexico; 46–905 m; moderately common.

Remarks: Some researchers consider this species a junior synonym of *S. maltzani* (Houart, 1985), but we follow McLean and Gosliner's view (1996) that it is a valid species.

Scabrotrophon maltzani (Kobelt and Küster, 1878). Sandpaper trophon.

Trophon maltzani Kobelt and Küster 1878; *Nipponotrophon maltzani* (Kobelt and Küster 1878); *Trophon subserratus*

Sowerby 1880; *Nipponotrophon subserratus* (Sowerby 1880); *Trophon (Trophonopsis) lasius* (Dall 1919): *In part of* Willett 1938; *Trophonopsis lasius* (Dall 1919): *In part of* Abbott 1974; *Nipponotrophon lasius* (Dall 1919): *Fide* Radwin and D'Attilio 1976.

Type locality: Kodiak, Alaska. Distribution: Eastern Bering Sea to California; intertidal zone to 300 m.

?***Scabrotrophon rossicus*** (Egorov, 1993). Russian trophon.

Type locality: Kuril Islands. Distribution: Western North Pacific; ?Bering Sea; type material collected in 180 m.

?***Scabrotrophon scarlatoi*** (Golikov and Sirenko, 1992). Scarlato's trophon.

Trophonopsis scarlatoi Golikov and Sirenko 1992.

Type locality: Kuril Islands. Distribution: Bering Sea (?eastern); 275–650 m; uncommon.

Family Turbinellidae

Exilioidea rectirostris (Carpenter, 1864).

Chrysodomus rectirostris Carpenter 1864; *Tritonofusus (Plicifusus) rectirostris*: Dall 1902; *Exilia rectirostris*: Oldroyd 1927; *Plicifusus (Microfusus) obsoletus* Talmadge 1971.

Type locality: Puget Sound, Washington. Distribution: Behm Canal, Alaska, to San Diego, California; 60–800 m.

Ptychatractus occidentalis Stearns, 1873.

Type locality: Near Attu Island, Aleutian Islands. Distribution: Chukchi and Beaufort seas to the Shumagin Islands, Alaska; Kuril Islands; 46–900 m.

Family Volutomitridae

Volutomitra alaskana Dall, 1902.

Volutomitra groenlandica alaskana (Dall 1902).

Type locality: Pribilof Islands, Bering Sea. Distribution: Pribilof Islands, Alaska, to San Diego, California; Kuril Islands; 50–1503 m.

Family Volutidae

Arctomelon stearnsii (Dall, 1872). Alaska or Stearn's volute.

Voluta (Scaphella) stearnsii Dall 1872; *Fulgoraria stearnsii* (Dall 1872); *Boreomelon stearnsii* (Dall 1872); *Tractolira stearnsi* (Dall 1872); *Sigaluta stearnsi* (Dall 1872).

Type locality: From a cod stomach, Nagai, Shumagin Islands. Distribution: Eastern Bering Sea to the Gulf of Alaska; Russia; 80–500+ m; common.

Arctomelon tamikoae Kosuge, 1970. Ribbed volute.

Type locality: East China Sea. Distribution: Type locality and Aleutian Islands; 100–400 m.

Family Cystiscidae

Granulina margaritula (Carpenter, 1857). Pear-shaped marginella.

Marginella margaritula Carpenter 1857; *Cypraeolina margaritula* (Carpenter 1857); *Volutella margaritula* (Carpenter 1857); *Volutella pyriformis* Carpenter 1864.

Type locality: San Diego, California. Distribution: Izhut Bay, Alaska to Mazatlan, Mexico; low tide to 73 m; common.

Superfamily Buccinoidea

Family Buccinidae

Anomalisipho altus (S. Wood, 1848).

Colus altus S. Wood 1848.

Type locality: Not traced. Distribution: Bering Strait; Bering, Barents, Kara, and Laptev seas; Kuril Islands; 22–640 m.

Anomalisipho conulus (Aurivillius, 1885).

Colus conulus Aurivillius 1885.

Type locality: Not traced. Distribution: Chukchi, Beaufort, Bering, and Laptev seas; 12–69 m.

Ancistrolepis beringianus Dall, 1919.

Neptunea (Ancistrolepis) beringiana (Dall 1919); *Neancistrolepis beringianus* (Dall 1919).

Type locality: Western Bering Sea. Distribution: Bering Sea; 106 m.

Ancistrolepis eucosmius (Dall, 1891). Corded or three-ribbed whelk.

Chrysodomus eucosmius Dall 1891; *Neptunea eucosmia* (Dall 1891); *Neptunea bicincta* Dall 1911; *Ancistrolepis eucosmius bicinctus* (Dall 1891); *Neptunea californica* (Dall 1919); *Ancistrolepis eucosmius koyamai* Habe and Ito 1971.

Type locality: Unalaska Island, Aleutian Islands. Distribution: Pribilof Islands to Oregon; western Bering Sea; 113–1426 m.

Aulacofusus brevicauda (Deshayes, 1832). Thick-ribbed whelk.

Fusus brevicauda Deshayes 1832; *Colus brevicauda* (Deshayes 1832); *Aulacofusus brevicauda* (Deshayes 1832); *Neptunea brevicauda* (Deshayes 1832); *Fusus spitsbergensis* Reeve 1855; *Colus spitsbergensis* (Reeve 1855); *Fusus lividus* Mörch 1862; *Colus lividus* (Mörch 1862).

Type locality: Kamchatka. Distribution: Circum-Arctic and boreal; Arctic Seas to Washington and Maine; Aleutian Islands; Kuril Islands; southern Sakhalin; Okhotsk Sea; Laptev Sea; 1–1000 m; uncommon.

Bathybuccinum clarki Kantor and Harasewych, 1998. Clark's whelk.

Type locality: Seguam Pass, Aleutian Islands. Distribution: Central and western Aleutian Islands; 150–410 m.

Bathybuccinum ovulum (Dall, 1895). Oval whelk.
Buccinum ovulum Dall 1895.

Type locality: Amukta Pass, Aleutian Islands. Distribution: Aleutian Islands; 400–800 m.

Beringius aleuticus Dall 1895. Aleutian whelk.
Japelion aleuticus (Dall 1895).

Type locality: Amukta Pass, Aleutian Islands. Distribution: Known only from type locality; 454 m; rare.

Beringius behringi (Middendorff, 1848). Bering's whelk.
Tritonium (Fusus) behringii Middendorff 1848; *Volutopsius behringi* (Middendorff 1848); *Volutopsius (beringii* Middendorff var.?) *kobelti* Dall 1902; *Beringius marshalli* Dall 1919.

Type locality: St. Paul Island, Bering Sea. Distribution: Arctic Alaska to Kodiak Island, Alaska; Kuril Islands; Okhotsk Sea; Laptev Sea; Arctic Canada; 7–200 m; common.

Beringius crebricostatus (Dall, 1877). Thick-ribbed or thick cord whelk.
Chrysodomus crebricostatus Dall 1877.

Type locality: Unalaska, Aleutian Islands. Distribution: North Alaska to northern Washington; Kuril Islands; 3–300 m; uncommon.

Beringius eyerdami A. G. Smith, 1959. Eyerdam's whelk.

Type locality: Strait of Juan de Fuca. Distribution: Southern Alaska to Oregon; subtidal zone to 200 m.

Beringius indentatus Dall, 1919.

Type locality: Khudobin Islands, Bering Sea. Distribution: Kotzebue Sound to the Aleutian Islands; Japan; Kuril Islands; 100–300 m.

Beringius kennicottii (Dall, 1871). Kennicott's whelk.
Buccinum kennicottii Dall 1871; *Jumala kennicottii* (Dall 1871); *Beringion kennicottii* (Dall 1871); *Beringius incisus* Dall 1907; *Beringius marshalli* (Dall 1919); *Volutopsius rotundus* Dall 1919.

Type locality: Captain's Harbor, Unalaska, Aleutian Islands. Distribution: Beaufort Sea to northern Washington; Okhotsk Sea; 3–200 m; moderately common.

Beringius stimpsoni (Gould, 1860). Stimpson's whelk.
Buccinum stimpsoni Gould 1860; *Strombella malleata* Dall 1884; *Beringius malleatus* (Dall 1884).

Type locality: Arakamcheche Island, Bering Strait. Distribution: Arctic Alaska to the Aleutian Islands; northern Sea of Japan; Kuril Islands; 40–200 m; common.

Beringius undatus Dall, 1919.
Beringius crebricostatus undatus Dall 1919.

Type locality: Cygnet Inlet, Boca de Quadra, Alaska. Distribution: Eastern Bering Sea to British Columbia; Kuril Islands; 100–435 m.

Buccinum acutispiratum Dall, 1907.

Type locality: Sea of Japan. Distribution: North Pacific, predominantly Asiatic; Sea of Japan on the northern half of the coast of Honshu; southern Primorye; Tatar Strait; western and northern parts of the Sea of Okhotsk; eastern and northeastern coasts of Hokkaido; northwestern coast of Alaska; littoral-bathyal zone, type material collected at 713 m.

Buccinum aleuticum Dall, 1895. Aleut whelk.

Type locality: South of Unimak Island, Aleutian Islands. Distribution: Aleutian Islands; North Kuril Islands; 40–250 m; uncommon.

Buccinum angulosum Gray, 1839. Angular whelk.
Buccinum angulosum subcostatum Dall 1885; *Buccinum angulosum transliratum* Dall 1919.

Type locality: Icy Cape, Alaska (Arctic Ocean). Distribution: Circum-boreal; Point Barrow, Alaska, to Kotzebue Sound, Alaska, and Aleutian Islands; Arctic Canada and Siberia; Svalbard; Murman Coast; Barents Sea; Kara Sea; Sea of Okhotsk; 5–289 m; common.

Buccinum baerii Middendorff, 1848.
Vollutharpa morchiana (Fischer 1859); *Buccinum fischerianum* Dall 1871.

Type locality: Bering Sea. Distribution: Eastern Bering Sea to British Columbia; throughout the Aleutian Islands; Commander Islands; Kuril Islands; 0–30 m; rare.

Buccinum bayani (Jousseaume, 1883).
Tritonium bayani Jousseaume 1883.

Type locality: Japan. Distribution: Southern Bering Sea; Japan; 77–742 m; rare.

Buccinum bulimuloideum Dall, 1907. Slender whelk.

Type locality: Southeast of the Alaska Peninsula. Distribution: Aleutian Islands to the Gulf of Alaska; Kuril Islands; eastern Kamchatka; 50–900 m; uncommon.

Buccinum castaneum (Dall, 1877).
Neptunea castaneum Dall 1877; *Volutopsion castaneum* (Dall 1877); *Buccinum castaneum fluctuatum* Dall 1919; *Buccinum castaneum incisulum* Dall 1919; *Buccinum castaneum triplostephanum* Dall 1919.

Type locality: Shumagin Islands, Aleutian Islands. Distribution: Chukchi and Beaufort seas to the northern Gulf of Alaska; 5–100 m; common.

Buccinum chartium Dall, 1919.

Type locality: Honshu Island, Sea of Japan. Distribution: Pribilof Islands and Japan; 475–1258 m; rare.

Buccinum ciliatum (O. Fabricius, 1780). Hairy whelk.
Tritonium ciliatum Fabricius 1780.

Type locality: Greenland. Distribution: Bering Strait to the western Gulf of Alaska; Barents and White seas; Chukchi and Okhotsk seas; Arctic Canada to the Gulf of St. Lawrence and Newfoundland; Greenland; Jan Mayen; Svalbard; 2–627 m; common.

Buccinum cnismatum Dall, 1907. Scratched whelk.

Type locality: Bering Sea, north of Unalaska, Aleutian Islands. Distribution: Eastern Bering to the Gulf of Alaska; southern Okhotsk Sea; northern Kuril Islands; 100–870 m; common.

Buccinum costatum Golikov, 1980. Costate whelk.

Type locality: Bristol Bay, Bering Sea. Distribution: Southeast Bering Sea; northern Kuril Islands; 250–820 m; common.

Buccinum diplodetum Dall, 1907.

Type locality: Sea Lion Rock, coast of Washington. Distribution: Sitka, Alaska, to Washington; Kuril-Kamchatka Trench; 1367–2869 m; rare.

Buccinum ectomocyma beringense Golikov, 1980.

Type locality: Bering Sea. Distribution: Bering Sea; 42–47 m; rare.

Buccinum elatior (Tryon, 1880).

Type locality: Not traced. Distribution: Boreal-Arctic, circumboreal; Beaufort Sea; Bering Sea; coast of New England; Newfoundland Bank; St. Lawrence Bay; Labrador; Hudson Bay; Davis Strait; Baffin Sea; west coast of Greenland; northern coast of Iceland; Jan Mayen Islands; Medved; Spitsbergen; Franz Josef Land; Norway; Barents Sea; Siberian Seas; Canadian Arctic archipelago; Kamchatka coast; northern Kuril Islands; Okhotsk Sea south to Hokkaido; sublittoral-bathyal zone; common.

Buccinum eugrammatum Dall, 1907. Lirate whelk.

Type locality: Petrel Bank (near Semisopochnoi Island, Aleutian Islands), Bering Sea. Distribution: Western Aleutian Islands; Kuril Islands; Okhotsk Sea; 30–300 m; uncommon.

Buccinum fringillum Dall, 1877. Finch whelk.

Type locality: Arctic Ocean near Icy Cape, Alaska. Distribution: Northern end of Nunivak Island, Bering Sea; Chukchi Sea; 5–100 m; uncommon.

Buccinum glaciale Linnaeus, 1761. Glacial whelk.

Buccinum carinatum Phipps 1774; *Buccinum donovani* Gray 1839; *Buccinum groenlandicum* Hancock 1846; *Tritonium hancocki* Mörch 1857; *Buccinum morchianum* Dunker 1858; *Buccinum ekblawi* Baker 1919; *Buccinum angulosum cnismatopleura* Dall 1919; *Buccinum cnismatopleura* Dall 1919; *Buccinum onismatopleura* Dall 1919; *Buccinum parallelum* Dall 1919; *Buccinum glaciale parallelum* (Dall 1919).

Type locality: Spitsbergen Island, Arctic Ocean. Distribution: Circum-boreal; Arctic Alaska to Washington; throughout the Aleutian Islands; Arctic Canada to the Gulf of St. Lawrence; Russian Arctic; Greenland; Jan Mayen; Svalbard; Japan; Okhotsk Sea; 1–600 m; common.

Buccinum hertzensteinii Verkruzen, 1882.

Type locality: Awacha Bay, Kamchatka. Distribution: Alaska (Bering Sea); northern Kuril Islands; Kamchatka; 30–111 m; rare.

Buccinum kadiakense Dall, 1907. Kodiak whelk.

Type locality: Kodiak Island, Alaska. Distribution: Known only from type locality; depth unknown; rare.

Buccinum maltzani Pfeffer, 1886.

Buccinum ovum auct., non Turton 1825; *Buccinum angulosum* var. *normalis* Dall 1885.

Type locality: Kara Sea. Distribution: Northern Bering Sea; Bering Strait; Beaufort Sea; White, Barents, Kara, Laptev, and East Siberian seas; 5–330 m; uncommon.

Buccinum normale Dall, 1885.

Buccinum angulosum normalis Dall 1885.

Type locality: Cape Smythe, Alaska. Distribution: Arctic Ocean from Point Barrow to Kotzebue Sound, Washington; depth unknown; uncommon.

Buccinum obsoletum Golikov, 1980.

Type locality: Northern Okhotsk Sea. Distribution: Chukchi Sea; Bering Strait; northern Bering Sea; Okhotsk Sea; East Siberian Sea; Laptev Sea; 18–146 m.

Buccium ochotense (Middendorff, 1848). Okhotsk whelk.

Tritonium ochotense Middendorff 1848.

Type locality: Okhotsk Sea. Distribution: Northern Bering Sea; Kamchatka; Okhotsk Sea; 0–260 m; uncommon.

Buccinum oedematum Dall, 1907. Swollen whelk.

Type locality: Near the Pribilof Islands, Bering Sea. Distribution: Pribilof and Sanak Islands to Tahwit Head, Washington; southern Kamchatka; western Bering Sea; 58–1000 m; common.

Buccinum orotundum Dall, 1907.

Buccinum pemphigus orotundum Dall 1907.

Type locality: North of Unimak Island, Bering Sea. Distribution: Nunivak, Pribilof, and Unimak islands, Bering Sea; 20–84 m; uncommon.

Buccinum percrassum Dall, 1883. Crude whelk.

Buccinum polare percrassa Dall in Kobelt 1883; *Buccinum chishimanum* Pilsbry 1904.

Type locality: North of Bering Strait. Distribution: Arctic Ocean north of the Bering Strait; Kuril Islands; southeastern Sakhalin; southern Kamchatka; Commander Islands; intertidal zone to 40 m; uncommon.

Buccinum physematum Dall, 1919.

Type locality: Bering Sea. Distribution: Bernard Harbor, Arctic coast, west to Point Barrow and south to Bristol Bay, Alaska; Chukchi Sea; Laptev Sea; collected in depths of about 50 m; uncommon.

Buccinum picturatum Dall, 1877. Painted whelk.

Type locality: Kiska, Aleutian Islands. Distribution:

Throughout the Aleutian Islands east to Bristol Bay and Kodiak Island, Alaska; western Bering Sea; 1–108 m; uncommon.

Buccinum planeticum Dall, 1919. Wandering whelk.
Type locality: Southwest of Hagemeister Island, Bering Sea. Distribution: Pribilof Islands, Bering Sea, to Queen Charlotte Islands, British Columbia; depth unknown; uncommon.

Buccinum plectrum Stimpson, 1865. Lyre whelk.
Type locality: Kuril Islands. Distribution: Point Barrow, Alaska, to Puget Sound; Arctic Canada to the Gulf of St. Lawrence; northern Kuril Islands; eastern Kamchatka; intertidal zone to 600 m; common.

Buccinum polare Gray, 1839. Polar whelk.
Buccinum polaris Gray 1839; *Buccinum totteni* Stimpson 1865; *Buccinum terranovae* Mörch 1869; *Buccinum elegans* Verkruzen 1878; *Buccinum subreticulatum* Habe et Ito 1965.
Type locality: Icy Cape, Alaska (Arctic Ocean). Distribution: Circum-boreal; Arctic Alaska to the Aleutian Islands; Arctic Canada and Siberia; Greenland; Iceland; Svalbard; Novaya Zemlya; eastern Siberia; Kamchatka; Okhotsk Sea; 2–1267 m; common.
Remarks: Kantor and Sysoev (2006) considered *Buccinum orotundum* Dall 1907 and *B. solenum* Dall 1919 to be junior synonyms of this species.

Buccinum rondinum Dall, 1919. Eroded whelk.
Type locality: Alaska Peninsula (southeastern Bering Sea). Distribution: Southeastern Bering Sea to the Gulf of Alaska; Kuril Islands; Okhotsk Sea; 50–1530 m; uncommon.

Buccinum rossellinum Dall, 1919.
Type locality: Southeast of Chirikof Island, Alaska. Distribtion: Known only from the type locality and eastern Kamchatka; 255–2000 m; rare.

Buccinum rossicum Dall, 1907.
Type locality: Aniva Bay, Sakhalin Island. Distribution: Predominantly Asiatic; along the northern half of Honshu to Toyama Bay and Boso Bay in the south to Hokkaido; the Primorye coast; Tatar Strait; southeast coast of Sakhalin, Aniva, Mordvidova, and Terpenia Bay; western and central Sea of Okhotsk; northern Kuril Islands; southeast coast of Kamchatka; Avachinski Bay; southwest part of Bristol Bay (Bering Sea); littoral to bathyal zones; uncommon.

Buccinum scalariforme Møller, 1842. Silky buccinum.
Buccinum tenue Gray 1839; *Buccinum elatium* Tryon 1880; *Buccinum rhodium* Dall 1919; *Buccinum lyperum* Dall 1919.
Type locality: Greenland. Distribution: Arctic Alaska to Washington; Arctic Canada to the Gulf of Maine; 15–500 m; common.

Buccinum sericatum Hancock, 1846. Silky whelk.
Type locality: West coast of Davis Strait, Arctic Canada. Distribution: Bering Strait; northern Bering Sea; Arctic Canada and Siberia; Greenland; Svalbard; Finnmark; Barents and Kara seas; 1.5–1187 m; uncommon.

Buccinum sigmatopleura Dall, 1907. Wavy whelk.
Type locality: Bering Island, Commander islands. Distribution: Western Aleutian and Commander islands; 30–249 m; uncommon.

?**Buccinum simplex** (Middendorff, 1848).
Tritonium simplex Middendorff 1848.
Type locality: Sea of Okhotsk, Shantar Island. Distribution: Pacific high boreal: Sea of Okhotsk; ?Kodiak Island, Alaska; predominantly sublittoral; rare.

Buccinum simulatum Dall, 1907.
Type locality: Petrel Bank(near Semisopochnoi Island, Aleutian Islands), Bering Sea. Distribution: Petrel Bank; northern Japan; 79–97 m; uncommon.

Buccinum solenum Dall, 1919. Solen whelk.
Type locality: Nunivak Island, Bering Sea. Distribution: Eastern Bering Sea to the Aleutian Islands; 30–100 m.

Buccinum striatissimum G. B. Sowerby III, 1899.
Type locality: Kumihama, Tango, Japan. Distribution: Pribilof Islands; Lynn Canal, Alaska; Sea of Japan; 91–1714 m; rare.

Buccinum strigillatum Dall, 1891.
Type locality: Guadalupe Island, Baja California, Mexico. Distribution: Northeastern Bering Sea to Guadalupe Island; Asian coast from Paramushir east to the eastern coast of Kamchatka and in Anadyr Bay; sublittoral to bathyal zones; uncommon.

Buccinum tenellum Dall, 1883. Pleated whelk.
Type locality: Cape Etolin, northern end of Nunivak Island, Bering Sea. Distribution: Sea Horse Islands, Arctic Ocean, to the Aleutian Islands; 30–100 m; uncommon.

Buccinum tenuisulcatum Golikov and Gulbin, 1977.
Type locality: Kuril Islands. Distribution: Southeastern Chukchi Sea; Kuril Islands; 44–132 m.

Buccinum viridum Dall, 1889. Turban whelk.
Type locality: Santa Barbara Islands, California. Distribution: Both coasts of the Bering Sea from the Pribilof Islands to California; depth >600 m; common.

Clinopegma magnum (Dall, 1895). Helmet whelk.
Chrysodomus magnus Dall 1895; *Neptunea magna* (Dall 1895); *Ancistrolepis magna* (Dall 1895); *Neptunea (Ancistrolepis) magna* (Dall 1895).
Type locality: North of Unimak Island, Bering Sea.

Distribution: Chukchi, Bering, and Okhotsk seas; 30–149 m; common.

Clinopegma magnum unicum (Pilsbry, 1905). Unique whelk.

Buccinum unicum Pilsbry 1905; *Clinopegma unicum* (Pilsbry 1905); *Chrysodomus damon* Dall 1907; *Ancistrolepis magna uritai* Kuroda 1931; *Clinopegma aequapaceum* Tiba 1981.

Type locality: Honshu, Japan. Distribution: Bering Sea; Japan; 23–457 m; uncommon.

Colus acosmius (Dall, 1891).

Chrysodomus (Sipho) acosmius Dall 1891).

Type locality: Unalaska Island, Bering Sea. Distribution: Chukchi Sea to Unalaska; 730–1258 m; rare.

Colus aphelus (Dall, 1889). Oblique or green whelk.

Chrysodomus aphelus Dall 1889; *Latisipho aphelus* (Dall 1889); *Chrysodomus (Sipho) hypolispus* Dall 1891; *Colus hypolispus* (Dall 1891).

Type locality: Santa Barbara, California. Distribution: Arctic seas to San Diego, California; 37–1554 m; common.

Colus aurantius (Dall, 1907). Broad-cord whelk.

Tritonofusus (Plicifusus) aurantius Dall 1907; *Plicifusus aurantius* (Dall 1907); *Helicofusus aurantius* (Dall 1907); *Plicifusus laticordatus* (Dall 1907); *Plicifusus (Latifusus) wakasanus* Dall 1918.

Type locality: Sea of Japan. Distribution: Eastern Bering Sea to Washington; Sea of Japan; northern and middle Kuril Islands; Okhotsk Sea; Korea; 60–1022 m; rare.

Colus barbarinus Dall, 1919. Santa Barbara whelk.

Plicifusus barbarinus (Dall 1919).

Type locality: Khudobin Island, Bering Sea. Distribution: Southern Bering Sea to off Khudobin Island; 97 m; rare.

Remarks: According to Baxter (1987), *C. barbarinus* may be a junior synonym of *C. roseus* (Dall 1877). The matter remains unresolved.

Colus bristolensis Dall, 1919.

Latisipho bristolensis (Dall 1919).

Type locality: Bering Sea. Distribution: Chukchi Sea to Unimak Island, Alaska; 49–113 m; uncommon.

Remarks: According to Baxter (1987), *C. bristolensis* may be a junior synonym of *C. roseus* (Dall 1877). The matter remains unresolved.

Colus brunneus (Dall, 1877). Brown whelk.

Chrysodomus brunneus Dall 1877; *Plicifusus brunneus* (Dall 1877); *Retifusus brunneus* (Dall 1877).

Type locality: Cape Etolin, Nunivak Island, Bering Sea. Distribution: Chukchi Sea to Nunivak and the Pribilof Islands; Kuril Islands; southern Sakhalin; 7–300 m; uncommon.

Colus calathus Dall, 1919.

Type locality: Near Shumagin Islands, Alaska. Distribution: Known only from type locality; 291 m; rare.

Colus callorhinus (Dall, 1877). Strombiform or slender whelk.

Volutopsius callorhinus Dall 1877; *Volutopsius callorhinus callorhinus* (Dall 1877); *Plicifusus callorhinus* (Dall 1877).

Type locality: St. Paul Island, Bering Sea. Distribution: Eastern Bering Sea to Kodiak Island, Alaska; 40–200 m; uncommon.

Colus capponius Dall, 1919.

Aulacofusus capponius (Dall 1919).

Type locality: Bering Strait, near Port Clarence. Distribution: Chukchi, Beaufort, and Bering seas; collected in depths of about 55 m; uncommon.

Colus dautzenbergi Dall, 1916.

Sipho verkruzeni Dautz. and Fischer 1912 (non Kobelt 1876); *Plicifusus verkruzeni* (Dautz. and Fischer 1912).

Type locality: Not traced. Distribution: Chukchi and eastern Bering seas; Greenland; depth unknown.

Colus errones Dall, 1919. Wayward whelk.

Latisipho errones (Dall 1919).

Type locality: Bering Sea. Distribution: Pribilof Islands, Bering Sea, to Strait of Juan de Fuca; Kuril Islands; Okhotsk Sea; 33–1000 m; uncommon.

Remarks: According to Baxter (1987), *Colus errones* may be a junior synonym of *C. hallii* (Dall 1873). The matter remains unresolved.

Colus esychus (Dall, 1907). Esychus colus.

Tritonofusus esychus Dall 1907; *Plicifusus esychus* (Dall 1907); *Aulacofusus capponius* (Dall 1907).

Type locality: Bering Island. Distribution: Point Barrow, Alaska, to Bering Island; 100–300 m; uncommon.

Colus griseus (Dall, 1889). Gray whelk.

Chrysodomus griseus Dall 1889; *Plicifusus griseus* (Dall 1889).

Type locality: Santa Barbara, California. Distribution: Eastern Bering Sea to California; 49–757 m; common.

Colus halibrectus (Dall, 1891).

Chrysodomus (Sipho) halibrectus Dall 1891.

Type locality: Akutan Island, Bering Sea. Distribution: Southern Bering Sea, near Unalaska; Kuril Islands; southern Sakhalin; 32–730 m; uncommon.

Colus halidonus Dall, 1919.

Latisipho halidonus (Dall 1919).

Type locality: Destruction Island, Washington. Distribution: Pribilof Islands to Monterey Bay, California; 148–1158 m; uncommon.

Colus halimeris (Dall, 1919).

Aulacofusus (Limatofusus) halimeris Dall 1919; *Limatofusus halimeris* (Dall 1919).

Type locality: Eastern Passage, near the Stikine River, southeastern Alaska. Distribution: Southeast Alaska to San Diego, California; 110–1503 m; uncommon.

Colus hallii (Dall, 1873). Shrew or Hall's whelk.

Latisipho hallii (Dall 1873); *Colus morditus* (Dall 1919); *Sipho hallii* (Dall 1873).

Type locality: Sanborn Harbor, Nagai, Shumagin Islands, Alaska. Distribution: Chukchi Sea; Nunivak Island, Bering Sea, to San Diego, California; Okhotsk Sea; western Bering Sea; intertidal zone to 1818 m; common.

Remarks: According to Kantor and Sysoev (2006), *Latisipho jordani, L. errones* and *L. georgianus* represent variants of the same broadly distributed species, and *Sipho halii* is the oldest name for it. However, pending a taxonomic revision and following their recommendation, we retain them here as separate species.

Colus herendeenii (Dall, 1902). Thin-ribbed whelk.

Tritonofusus (Plicifusus) herendeeni Dall 1902); *Fusus herendeeni* (Dall 1902); *Aulacofusus herendeeni* (Dall 1902); *Colus nobilis* (Dall 1919).

Type locality: Bering Sea and Aleutian Islands. Distribution: Eastern Bering Sea to the western Gulf of Alaska; Kuril Islands; Okhotsk Sea; Moneron Island; 16–1920 m; common.

Colus incisus (Dall, 1919).

Plicifusus (Retifusus) incisus Dall 1919; *Plicifusus incisus* (Dall 1919).

Type locality: Western Bering Sea. Distribution: Arctic Ocean to the eastern Bering Sea and Shumagin Islands; 69–99 m; uncommon.

Colus jordani (Dall, 1913). Jordan's whelk.

Tritonofusus jordani Dall 1913; *Latisipho jordani* (Dall 1913).

Type locality: Puget Sound, Washington. Distribution: Eastern Bering Sea to California; northern and middle Kuril Islands; Okhostk Sea; 2–1157 m; common.

Remarks: According to Baxter (1987), *C. jordani* may be a junior synonym of *C. hallii* (Dall 1873). The matter remains unresolved.

Colus martensi (Krause, 1885). Marten's whelk.

Sipho martensi Krause 1885; *Anomalosipho martensi* (Krause 1885); ?*Fusus (Euthria) conulus* Aurivillius 1887.

Type locality: Mechigmenskiy Bay, Kamchatka, Bering Sea. Distribution: Point Barrow, Alaska, and Plover Bay, Bering Strait; northern Bering Sea; Arctic Canada; 15–55 m; uncommon.

Colus oceanodromae (Dall, 1919). Seahorse or swift whelk.

Plicifusus (Retifusus) oceanodromae Dall 1919; *Plicifusus oceanodromae* (Dall 1919).

Type locality: Petrel Bank(near Semisopochnoi Island, Aleutian Islands), Bering Sea. Distribution: Southern Bering Sea; Aleutian Islands to the Shumagin Islands, Alaska; 30–120 m; uncommon.

Colus ombronius Dall, 1919. Shady whelk.

Aulacofusus ombronius (Dall 1919).

Type locality: Bering Sea, between Bristol Bay and Pribilof Islands. Distribution: Chukchi Sea; Nunivak Island to Bristol Bay and Pribilof Islands; northern and middle Kuril Islands; Okhotsk Sea; eastern Kamchatka; western Bering Sea; 35–180 m; uncommon.

Colus periscelidus (Dall, 1891). Garter whelk or thick-ribbed colus.

Chrysodomus periscelidus Dall 1891; *Fusus periscelidus* (Dall 1891); *Aulacofusus periscelidus* (Dall 1891).

Type locality: Akutan Islands, Alaska. Distribution: Chukchi and Beaufort seas to the Aleutian Islands as far east as Sanak Island; Commander Islands; Kuril Islands; 20–200 m; uncommon.

Colus pulcius (Dall, 1919).

Aulacofusus (Limatofusus) pulcius Dall 1919; *Helicofusus pulcius* (Dall 1919); *Fusus (Sipho) turritus* Aurivillius 1885 (non *Fusus turritus* Schafhautl 1863).

Type locality: Arctic Ocean north of Bering Strait. Distribution: Known only from type locality; depth unknown; rare.

Colus sabini (Gray, 1824).

Buccinum sabini Gray 1824; *Fusus reeveanus* Petit de la Saussaye 1846; *Fusus ebur* Mörch 1869; *Fusus togatus* Mörch 1869; *Colus togatus* (Mörch 1869); *Fusus pfaffi* Mörch 1876; *Neptunea hanseni* Friele 1879; *Fusus hirsutus* Jeffreys 1883; *Sipho brevispira* Brögger 1900.

Type locality: Gulf of Maine. Distribution: Chukchi Sea; Canadian Arctic; Greenland to Gulf of Maine; depth unknown.

Colus sapius Dall, 1919.

Colus (Aulacofusus) sapius Dall 1919.

Type locality: Sitka, Alaska. Distribution: Known only from type locality; 2869 m; rare.

Colus stejnegeri (Dall, 1884). Stejneger's whelk.

Strombella callorhina var. *stejnegeri* Dall 1884; *Volutopsius callorhina stejnegeri* (Dall 1884); *Plicifusus stejnegeri* (Dall 1884); *Turrivolutopsius stejnegeri* (Dall 1884).

Type locality: St. Paul Island, Pribilof Islands. Distribution: Eastern Bering Sea; Aleutian Islands; Bering Island; middle and northern Kuril Islands; southeastern Kamchatka; 10–140 m; uncommon.

Colus timetus (Dall, 1919).

Aulacofusus (Limatofusus) timetus Dall 1919; *Limatofusus timetus* (Dall 1919).

Type locality: Iliuiuk Harbor, Unalaska, Bering Sea. Distribution: Known only from type locality; 35 m; rare.

Colus trombinus (Dall, 1919).

Aulacofusus (Limatofusus) trombinus Dall 1919; *Limatofusus trombinus* (Dall 1919).

Type locality: Pribilof Islands, Bering Sea. Distribution: Beaufort Sea to Pribilof Islands; type material collected in 66 m; rare.

Remarks: According to Baxter (1987), *Colus trombinus* may be a junior synonym of *C. roseus* (Dall 1877). The matter remains unresolved.

Colus trophius (Dall, 1919).

Aulacofusus (Limatofusus) trophius Dall 1919; *Limatofusus trophius* (Dall 1919).

Type locality: Sea Lion Rock, Washington. Distribution: Eastern Bering Sea to San Nicolas Island; 49–2012 m.

Colus virens (Dall, 1877). Green or little whelk.

Chrysodomus virens Dall 1877; *Plicifusus virens* (Dall 1877); *Retifusus virens* (Dall 1877); *Retimohnia virens* (Dall 1877).

Type locality: Kiska Harbor, Aleutian Islands. Distribution: Southern Bering Sea to the western Gulf of Alaska; Kuril Islands; southern Sakhalin; 18–430 m; common.

Habevolutopsius attenuatus (Dall, 1874). Elongate or attenuate whelk.

Volutopsius attenuatus Dall 1874.

Type locality: Cape Epsenburg. Distribution: Arctic Ocean to the Pribilof Islands and Bristol Bay; Kuril Islands; Sakhalin; Kamchatka; 10–300 m.

Remarks: Kantor and Sysoev (2006) considered *Volutopsius filosus* Dall 1919 to be a junior synonym of *H. attenuatus*.

Habevolutopsius hirasei (Pilsbry, 1907).

Volutopsius hirasei Pilsbry 1907; *Volutopsius diminutus* Dall 1919.

Type locality: Kessenuma (Japan, northeastern Hokkaido). Distribution: Chukchi Sea; northern Bering Sea; southern Kuril Islands; 40–492 m; rare.

Liomesus nassula Dall, 1901. Basket whelk.

Pseudoliomesus nassula (Dall 1901).

Type locality: Pribilof Islands, Bering Sea. Distribution: Eastern Bering Sea to the Aleutian Islands; Okhotsk Sea; Kuril Islands; western Bering Sea; 20–225 m; rare.

Lirabuccinum dirum (Reeve, 1846). Dire whelk.

Buccinum dirum Reeve 1846; *Searlesia dira* (Reeve 1846).

Type locality: Not specified. Distribution: Chirikof Island, Alaska, to Monterey, California; shallow water; rare.

Lussivolutopsius filosus (Dall, 1919). Threaded or filose whelk.

Volutopsius filosus Dall 1919.

Type locality: Kudobin Islands, Bering Sea. Distribution: Eastern Bering Sea to the western Gulf of Alaska; 30–100 m; uncommon.

Mohnia corbis Dall, 1913.

Type locality: Pribilof Islands, Bering Sea. Distribution: Pribilof Islands; 3239 m; rare.

Mohnia exquisita Dall, 1913.

Type locality: Koniugi Islands, Bering Sea. Distribution: Aleutian Islands; 3230 m; rare.

Mohnia siphonoidea Dall, 1913.

Type locality: Pribilof Islands, Bering Sea. Distribution: Known only from type locality and northern Kuril Islands; 552–1805 m; rare.

Morrisonella pacifica (Dall, 1908).

Belomitra pacifica (Dall 1908).

Type locality: Southwest of Sitka, Alaska. Distribution: Southeast Alaska; depth unknown; rare.

Neoberingius frielei (Dall, 1895). Friele's whelk.

Beringius frielei Dall 1895.

Type locality: Pribilof Islands, Bering Sea. Distribution: Eastern Bering Sea and the Aleutian Islands; Okhotsk Sea; middle and northern Kuril Islands; 82–600 m; common.

Neptunea amianta (Dall, 1890). White neptune.

Chrysodomus amiantus Dall 1890.

Type locality: Near Santa Barbara Islands, California. Distribution: Aleutian Islands and Gulf of Alaska to Baja California, Mexico; 100–3500 m, usually between 300–1500 m; common.

Neptunea borealis (Philippi, 1850). Little neptune.

Fusus borealis Philippi 1850; *Neptunea satura* var. *elongata* Løyning 1932.

Type locality: Svaldbard, Spitsbergen Island, western Barents Sea. Distribution: Arctic Ocean; ?eastern Bering Sea; 8–195 m; common.

Remarks: Fraussen and Terryn (2007) recorded this species only from the Barents, Kara, and Laptev seas. Kantor and Sysoev (2006) considered *Neptunea borealis* to be a junior synonym of *N. communis* (Middendorff 1848).

Neptunea communis (Middendorff, 1848).

Tritonium (Fusus) antiquum var. *communis* Middendorff 1848; *Chrysodomus saturus communis* (Middendorff 1848).

Type locality: Arctic Ocean. Distribution: Point Barrow, Arctic Ocean, to the Bering Sea; White Sea; 8–195 m.

Remarks: Kantor and Sysoev (2006) considered *Fusus borealis* Philippi 1850 to be a junior synonym of *N. communis*.

Neptunea gyroscopoides Fraussen and Terryn, 2007.

Type locality: Pribilof Islands, Bering Sea. Distribution: Bering Sea: Pribilof Islands; Gulf of Kronotsky; Gulf of Oljutor; Gulf of Anadyr; ?Kuril Islands; 52–80 m.

Neptunea heros (Gray, 1850). Northern neptune.

Fusus fornicatus Gray 1839; *Chrysodomus heros* Gray 1850; *Fusus fornicatus* forma *normalis* Aurivillius 1885; *Chrysodomus saturus* Martyn, var. *tabularis* Dall 1919; *Neptunea middendorffiana* MacGinitie 1959.

Type locality: Between the mouth of the Mackenzie River and Cape Parry, Arctic Canada. Distribution: Semi-circumarctic: Chukchi and Beaufort seas to southeastern Bering Sea; Kamchatka Peninsula and Kuril Islands; Siberian coast; Svaldbard; Franz Josef Land; Barents Sea; western Novaya Zemlya; Kara Sea; to a depth of approximately 100 m; common.

Neptunea insularis (Dall, 1895).

Chrysodomus insularis Dall 1895.

Type locality: Near Pribilof Islands, Bering Sea. Distribution: Eastern and western Bering Sea; Okhotsk Sea; eastern Kamchatka; western Bering Sea; 150–1000 m; common.

Neptunea ithia (Dall, 1891).

Chrysodomus ithius Dall 1891; *Chrysodomus phoeniceus* Dall 1891 (*fide* Fraussen and Terryn, 2007) (non Dall 1891).

Type locality: California. Distribution: Southern Alaska to California; 30–940 m; uncommon.

Neptunea lyrata (Gmelin, 1791). Lyre neptune.

Murex lyratus Gmelin 1791; *Buccinum liratum*: Martyn 1784; *Murex glomulus cereus* Chemnitz 1788; *Fusus succinctus* Menke 1829; *Cymatium (Linatella) pacificum* Dall 1909.

Type locality: Nootka Sound ("King George Sound"), British Columbia. Distribution: Southeastern Bering Sea; Aleutian Islands; Gulf of Alaska to Washington; Japan and Okhotsk seas; 17–1724 m; common.

Remarks: Kantor and Sysoev (2006) considered *Chrysodomus phoeniceus* Dall 1891 to be a junior synonym of *N. lyrata*.

Neptunea multistriata (Aurivillius, 1885).

Fusus fornicatus forma *multistriata* Aurivillius 1885.

Type locality: Not specified. Distribution: Boreal to Arctic Pacific; northern and central Bering Sea (Bering Strait, St. Lawrence and Pribilof islands, Gulf of Anadyr); Sea of Okhotsk; Barents Sea; 30–93 m; uncommon.

Neptunea phoenicea (Dall, 1891). Phoenician neptune.

Chrysodomus phoeniceus Dall 1891; *Neptunea staphylifius* (Dall 1919).

Type locality: British Columbia. Distribution: Gulf of Alaska to California; 1–300 m; uncommon.

Remarks: This species was regarded a junior synonym of *N. ithia* (Dall 1891) by Fraussen and Terryn (2007).

Neptunea pribilofensis (Dall, 1919). Pribilof neptune.

Chrysodomus pribilofensis Dall 1919.

Type locality: Pribilof Islands, Bering Sea. Distribution: Eastern Bering Sea and Aleutian Islands to northern California; Kuril Islands; Commander Islands; 55–570 m; common.

Neptunea smirnia (Dall, 1919). Chocolate neptune.

Chrysodomus smirnius Dall 1919.

Type locality: Strait of Juan de Fuca, British Columbia. Distribution: Southeast Alaska to California; to a depth of approximately 300 m; uncommon.

Neptunea stilesi Smith, 1968. Inflated neptune.

Type locality: Not specified. Distribution: Southeast Alaska to Oregon; 100–250 m; rare.

Neptunea tabulata (Baird, 1863). Tabled neptune.

Chrysodomus tabulatus Baird 1863.

Type locality: Puget Sound, Washington. Distribution: Southeastern Alaska to southern California; 9–450 m; common.

Neptunea ventricosa (Gmelin, 1791). Fat neptune.

Buccinum ventricosum Gmelin 1791; *Fusus bulbosus* Valenciennes in Du Petit Thouars 1846; *Tritonium (Fusus) antiquum* var. *behringiana* Middendorff 1848; *Fusus fornicatus* forma *conica* Aurivillius 1885; *Fusus fornicatus* forma *intermedia* Aurivillius 1885; *Fusus fornicatus* forma *devexa* Aurivillius 1885; *Chrysodomus nuceus* Dall 1919; *Chrysodomus solutus* var. *cordatus* Dall 1919; *Neptunea beringiana* var. *unicostata* Golikov 1963.

Type locality: King George Sound, Southeast Alaska. Distribution: High boreal to Arctic; Chukchi and Beaufort seas to Southeast Alaska; southern and eastern Sakhalin to the northern Kuril Islands in the western North Pacific; Arctic Canada; East Siberian Sea; subtidal zone to 320 m; common.

Remarks: Kantor and Sysoev (2006) considered *Chrysodomus heros* Gray to be a junior synonym of *N. ventricosa*.

Ovulatibuccinum ovulum (Dall, 1895).

Buccinum ovulum Dall 1895.

Type locality: Amukta Pass, Aleutian Islands. Distribution: North Pacific high boreal; type material collected at 454 m; common.

Plicifusus kroeyeri (Möller, 1842). Arctic whelk.

Fusus kroyeri Möller 1842; *Plicifusus kroyeri* (Möller); *Colus kroyeri* (Möller 1842); *Plicifusus arcticus* (Philippi 1850); *Plicifusus johanseni* Dall 1919.

Type locality: Greenland. Distribution: Circumpolar; Arctic Alaska to British Columbia; Sea of Japan; northern Kuril Islands; Arctic Canada and Russia; Labrador to Newfoundland; Greenland; Murman Coast; Kolquew; northern Laptev Sea; intertidal zone to 225 m; common.

Remarks: Kantor and Sysoev (2006) considered

Plicifusus johanseni Dall 1919 to be a separate species and not a junior synonym of this species.

Plicifusus mcleani Sirenko, 2009.

Type locality: Bering Strait. Distribution: Known only from type locality; 51.7 m.

Pseudoliomesus canaliculatus (Dall, 1874).

Buccinopsis canaliculata Dall 1874; *Liomesus ooides canaliculatus* (Dall 1874).

Type locality: Cape Espenberg, Kotzebue Sound, Alaska. Distribution: Icy Cape, Arctic Ocean, to the Shumagin Islands; Sea of Japan; southern and western Okhotsk Sea; 16–246 m; common.

Pseudoliomesus ooides (Middendorff, 1848). Egg whelk or nut whelk.

Liomesus ooides (Middendorff 1848); *Liomesus nux* Dall 1877.

Type locality: Tugur Bay, western Okhotsk Sea. Distribution: Arctic seas to Aleutian Islands; Okhotsk Sea; 5–196 m; common.

Pyrulofusus deformis (Reeve, 1847). Warped whelk.

Fusus deformis Reeve 1847; *Volutopsius deformis* (Reeve 1847).

Type locality: Spitsbergen. Distribution: Point Barrow, Alaska, to the Aleutian Islands; Bering, Okhotsk, White, and Kara seas; Canadian Arctic; New Siberian Islands; Greenland; 4–170 m; common.

Pyrulofusus dexius Dall, 1907. Aleutian melon whelk.

Volutopsius (Pyrulofusus) dexius Dall 1907; *Pyrulofusus harpa dexius* (Dall 1907); *Pyrulofusus dexius japonicas* Habe, Ito and Tanji 1980.

Type locality: Petrel Bank (near Semisopochnoi Island, Aleutian Islands), Bering Sea. Distribution: Eastern and central Aleutian Islands; North and South Kuril Islands; 50–230 m; common.

Pyrulofusus harpa (Mörch, 1857). Left-hand whelk.

Neptunea harpa Mörch 1857; *Volutopsius harpa* (Mörch 1857).

Type locality: Sitka, Alaska. Distribution: Pribilof Islands to the eastern Aleutian Islands and Southeast Alaska; intertidal zone to 300 m; common.

Pyrulofusus melonis (Dall, 1891). Giant melon whelk.

Strombella melonis Dall 1891; *Volutopsius melonis* (Dall 1891).

Type locality: Unalaska Island, Bering Sea. Distribution: Chukchi Sea and eastern Bering Sea to the Aleutian Islands; northern Kuril Islands; Okhotsk Sea; 112–461 m; common.

Retifusus roseus (Dall, 1877). Rosy whelk.

Chrysodomus roseus Dall 1877; *Limatofusus roseus* (Dall 1877); *Aulacofusus roseus* (Dall 1877); *Colus roseus* (Dall 1877).

Type locality: Bering Strait, Arctic Ocean. Distribution: Arctic Alaska (Cape Lisburne) to eastern Bering Sea; Chukchi Sea; Okhotsk Sea; Arctic Canada; New Siberian Islands; 15–120 m; uncommon.

Retimohnia robusta (Dall, 1913).

Mohnia robusta Dall 1913.

Type locality: Pribilof Islands, Bering Sea. Distribution: Pribilof Islands; 1805–2562 m; rare.

Sulcosinus taphrius (Dall, 1891). Sulcated whelk.

Buccinum taphrium Dall 1891; *Neptunea (Sulcosinus) taphria* (Dall 1891).

Type locality: Akutan Island, Bering Sea. Distribution: Southeast Bering Sea; 450–800 m; rare.

Volutharpa ampullacea (Middendorff, 1848). Paper or big-mouth whelk.

Bullia ampullacea Middendorff 1848.

Type locality: Shantar Islands, western Okhotsk Sea. Distribution: Bering Strait to Strait of Juan de Fuca; throughout the Aleutian Islands; Japan; Kuril Islands; Okhotsk Sea; intertidal zone to 500 m; moderately common.

Volutharpa perryi (Jay, 1856).

Bullia perryi Jay 1856.

Type locality: Bay of Yedo, Japan. Distribution: St. Paul Island, Bering Sea; Japan; depth unknown; rare.

Volutopsius castanea (Mörch, 1857). Volute or chestnut whelk.

Neptunea castanea Mörch 1857; *Fusus castaneus* (Mörch 1857); *Strombella castanea*: Dall 1879; *Volutopsius simplex* Dall 1907; *Volutopsius stefanssoni* Dall 1919.

Type locality: Sitka Island, Baranoff Archipelago. Distribution: Chukchi and Beaufort seas; eastern Bering Sea to Southeast Alaska; Peter the Great Bay; northern Sea of Japan; Okhotsk Sea; Kuril Islands; intertidal zone to 414 m; uncommon.

Volutopsius fragilis (Dall, 1891). Fragile whelk.

Strombella fragilis Dall 1891.

Type locality: Unimak Island, Bering Sea. Distribution: Chukchi Sea to Dutch Harbor, Aleutian Islands; northern Okhotsk Sea; 21–221 m; uncommon.

Volutopsius middendorffi (Dall, 1891). Tulip or Middendorff's melon whelk.

Strombella middendorffi Dall 1891.

Type locality: Unimak Pass, Aleutian Islands. Distribution: Chukchi Sea to Gulf of Alaska; western Bering Sea; 66–400 m; uncommon.

Volutopsius norwegicus (Gmelin, 1791).

Strombus norwegicus Gmelin 1791; *Fusus largillierti* Petit de la Saussaye 1851.

Type locality: Norway. Distribution: Chukchi, Beaufort, Barents, Kara, Laptev, and East Siberian seas; south to Newfoundland Bank in the Northwest Atlantic; 15–1267 m.

Volutopsius pallidus Tiba, 1973.
Type locality: Japan. Distribution: Aleutian Islands; western Pacific; recorded at a depth of 190 m (Baxter, 1987).

Volutopsius regularis Dall, 1873. Regular or white melon whelk.
Volutopsius beringi regularis Dall 1873.
Type locality: Unalaska, Aleutian Islands. Distribution: Pribilof Islands south to the Aleutian and Shumagin Islands; Middle and North Kuril Islands; intertidal zone to 144 m; common.

Volutopsius trophonius Dall, 1902. Frilled whelk.
Type locality: Pribilof Islands. Distribution: Eastern Bering Sea; 148–300 m; common.

Family Columbellidae

Alia carinata (Hinds, 1844). Carinate dovesnail.
Columbella carinata Hinds 1844; *Mitrella carinata* (Hinds 1844); *Nitidella carinata* (Hinds 1844); *Nitidella californiana* (Gaskoin 1852).
Type locality: San Diego, California. Distribution: Southern Alaska to Baja California, Mexico; intertidal zone to 15 m; uncommon.

Alia gausapata (Gould, 1850). Shaggy dovesnail.
Columbella gausapata Gould 1850; *Astyris gausapata* (Gould 1850); *Mitrella gausapata* (Gould 1850); *Nitidella gausapata* (Gould 1850); *Nitidella gouldii* Carpenter in Gould and Carpenter 1857; *Columbella dalli* E. A. Smith 1880; *Nitidella* lutulenta(?) Dall 1919; *Alia casciana* Dall 1919.
Type locality: Puget Sound, Washington. Distribution: Bechevin Bay, northwestern side of Alaska Peninsula, Alaska, to Punta San Pablo, Baja California, Mexico; 20–200 m.

Alia tuberosa (Carpenter, 1864). Swelled or variegated dovesnail.
Amycla tuberosa Carpenter 1864; *Columbella tuberosa* (Carpenter 1864); *Mitrella tuberosa* (Carpenter 1864).
Type locality: Santa Barbara, California. Distribution: Southern Alaska to Baja California, Mexico; intertidal and subtidal zones; common.

Amphissa columbiana Dall, 1916. Wrinkled or Columbian amphissa.
Buccinum corrugatum Reeve 1847; *Columbella valga* Cooper 1860; *Amphissa altior* Dall 1916.
Type locality: Puget Sound, Washington. Distribution: Eastern Aleutian Islands as far west as Chuginadak Island south to southern California; intertidal zone to 50 m.

Amphissa reticulata Dall, 1916. Reticulated amphissa.
Amphissa versicolor var. *reticulata* Dall 1916; *Amphissa versicolor versicolor* Dall 1916.
Type locality: Point Loma, San Diego County, California. Distribution: Kenai Peninsula, Alaska to Baja California, Mexico; 30–300 m.

Amphissa versicolor Dall, 1871. Variegate amphissa.
Amphissa versicolor var. *lineata* Stearns 1873; *Amphissa versicolor* var. *incisa* Dall 1916.
Type locality: Monterey, California. Distribution: Gulf of Alaska to Baja California, Mexico; shallow water to littoral zone.

Astyris amiantis (Dall, 1919).
Columbella amiantis Dall 1919; *Mitrella amiantis* (Dall 1919).
Type locality: Kiska Harbor, Aleutian Islands. Distribution: Throughout the Aleutian Islands; northern Sea of Japan; southern Sakhalin; Kuril Islands; 20–580 m.

Astyris elegans Gulbin, 1983. Elegant dovesnail.
Type locality: Bering Island, Commander Islands. Distribution: Aleutian Islands; Commander Islands; 15–100 m.

?Astyris permodesta (Dall, 1890).
Columbella permodesta Dall 1890; *Mitrella permodesta*: Abbott 1974.
Type locality: Santa Barbara Islands, California. Distribution: ?Aleutian Islands to Baja California, Mexico; 300–1000 m.
Remarks: Abbott (1974) listed this species as occurring in the Aleutian Islands but McLean and Gosliner (1996) reported Monterey Bay, California as the northernmost record.

Astyris rosacea (Gould, 1840). Rosy northern dovesnail.
Buccinum rosaceum Gould 1840; *Columbella rosacea* (Gould 1840); *Mitrella rosacea* (Gould 1840); *Mitrella holboellii* Möller 1842; *Fusus pellucidus* Hancock 1846.
Type locality: Cohasset, Massachusetts. Distribution: Circumboreal; Icy Cape, Arctic Ocean to Pearl Straits, Alaska; throughout the Aleutian Islands; Arctic Canada and Siberia; Barents, White, Kara, and Laptev seas; Greenland; Labrador to Cape Cod; Faroe Islands; Svalbard; Finnmark to Novaya Zemlya; Bering Sea; 1–350 m; common.

Family Nassariidae

Nassarius fossatus (Gould, 1850). Channeled or giant western nassa.
Buccinum elegans Reeve 1842; *Buccinum fossatum* Gould 1850; *Nassa reevei* A. Adams 1852; *Nassa morleti* Crosse 1867.
Type locality: Puget Sound. Distribution: Southern

Alaska to Baja California, Mexico; intertidal zone to 18 m.

Nassarius mendicus (Gould, 1850). Lean western nassa.

Nassa mendica Gould 1850; *Alectrion mendicus* (Gould 1850); *Nassa cooperi* Forbes 1852; *Nassa woodwardi* Forbes 1852; *Nassa gibsii* Cooper 1859; *Nassa acutangula* Marrat 1877; *Alectrion mendicus indisputabilis* Oldroyd 1927.

Type locality: Puget Sound, Washington. Distribution: Kodiak Island, Alaska to Baja California, Mexico; intertidal zone to 75 m.

Superfamily Olivoidea

Family Olivellidae

Olivella baetica Carpenter, 1864. Beatic dwarf olive.

Olivella porteri Dall 1910; *Olivella diegensis* Oldroyd 1921; *Olivella mexicana* Oldroyd 1921.

Type locality: San Diego, California. Distribution: Alaska to Baja California, Mexico; intertidal zone to 60 m.

Olivella biplicata (G. B. Sowerby I, 1825). Purple olive.

Olivella lapillus Vanatta 1915; *Olivella angelina* Oldroyd 1921; *Olivella fucana* Oldroyd 1921; *Olivella parva* Oldroyd 1921.

Type locality: Monterey, California. Distribution: Southern Alaska to Baja California, Mexico; intertidal zone to 50 m.

Superfamily Cancellarioidea

Family Cancellariidae

Admete californica (Dall, 1908). California admete.

Cancellaria californica Dall 1908.

Type locality: San Diego, California. Distribution: Southern end of Kruzof Island, Alaska, to Baja California, Mexico; 170–2000 m.

Admete gracilior (Carpenter, 1869). Slender admete.

Cancellaria gracilior Carpenter 1869; *Admete couthouyi gracilior* (Carpenter 1869); *Admete modesta gracilior* (Carpenter 1869); *Massyla (Massyla) gracilior* (Carpenter 1869).

Type locality: Santa Barbara, California. Distribution: Arctic Ocean to California; 18–73 m.

Admete laevior Leche, 1878.

Admete couthouyi laevior (Leche 1878); *Admete middendorffiana* Dall 1884; *Cancellaria middendorffiana* (Dall 1884).

Type locality: Bering Sea. Distribution: Arctic Ocean to Puget Sound, Washington; Peter the Great Bay; northern Sea of Japan; 60 m.

Admete solida (Aurivillius, 1885).

Trichotropis solida Auivillius 1885; *Admete regina* Dall 1911.

Type locality: Not traced. Distribution: Arctic Ocean to the Pribilof Islands; 30–100 m.

Admete viridula (O. Fabricius, 1780). Northern admete.

Tritonium viridulum Fabricius 1780; *Admete viridula* var. *product* (Fabricius 1780); *Propebela viridula* (Fabricius 1780); *Cancellaria buccinoides* Couthouy 1838 (non Sowerby 1832); *Cancellaria couthouyi* Jay 1839; *Admete couthouyi* (Jay 1839); *Admete crispa* Møller 1842; *Admete borealis* A. Adams 1855; *Admete undatocostata* Verkrüzen 1875; *Admete distincta* Leche 1878; *Admete producta* Leche 1878; *Admete undata* Leche 1878; *Admete viridula* var. *laevior* Leche 1878; *Admete viridula* var. *ventricosa* Friele 1879; *Nematoma tomiyaensis iiokaensis* Ozaki 1958.

Type locality: Greenland. Distribution: Circum-boreal, south to California; 3–1100 m.

Cancellaria crawfordiana Dall, 1892.

Cancellaria ghiorum Costa 1993.

Type locality: Drake's Bay, Marin, California. Distribution: ?Southern Alaska to Baja California, Mexico; 40–290 m.

Neadmete modesta (Carpenter, 1864). Modest admete.

Cancellaria modesta Carpenter 1864; *Admete modesta* (Carpenter 1864); *Cancellaria circumcincta* Dall 1873; *Admete circumcincta* (Dall 1873); *Neadmete circumcincta* (Dall 1873); *Cancellaria unalaskensis* Dall 1873; *Admete unalaskensis* (Dall 1873).

Type locality: Neah Bay, Washington. Distribution: Aleutian Islands to Baja California, Mexico; 9–91 m.

Superfamily Conoidea

Family Conidae

Curtitoma decussata (Couthouy, 1839).

Pleurotoma decussata Couthouy 1839; *Oenopota decussata* (Couthouy 1839); *Bela tenuicostata* M. Sars 1868; *Bela conoidea* G. O. Sars 1878.

Type locality: Massachusetts Bay. Distribution: Point Barrow, Alaska, to the Bering Sea; Arctic Canada; Labrador to New England; Greenland; North Atlantic to Svalbard; Barents Sea; 3–2582 m; uncommon.

Curtitoma fiora (Dall, 1919).

Lora fiora Dall 1919; *Oenopota fiora* (Dall 1919).

Type locality: Adak Island, Aleutian Islands. Distribution: Aleutian Islands to Sitka, Alaska; Okhotsk Sea; type material collected in 27 m.

Curtitoma incisula (Verrill, 1882).

Bela incisula Verrill 1882; *Oenopota incisula* (Verrill 1882); *Curtitoma hecuba* Bartsch 1941.

Type locality: New England. Distribution: Amphiboreal; Chukchi, Bering, and Okhotsk seas; Sea of Japan; Newfoundland; western Greenland; 15–494 m.

Curtitoma lawrenciana (Dall, 1919).

Lora lawrenciana Dall 1919; *Obesitoma lawrenciana* (Dall 1919); *Lora nazanensis* Dall 1919.

Type locality: Plover Bay, Bering Strait. Distribution: Point Belcher, Arctic Ocean to Pribilof Islands, Bering Sea; eastern and southern Kamchatka; South Kuril Islands; Sea of Japan; 4–380 m.

Curtitoma novajasemljensis (Leche, 1878).

Pleurotoma novajasemljensis Leche 1878; *Lora novajasemljensis* (Leche 1878); *Oenopota novajasemljensis* (Leche 1878).

Type locality: Novaya Zemlya. Distribution: Circum-Arctic; 3–450 m.

Curtitoma trevelliana (Turton, 1834).

Pleurotoma reticulata Brown 1827; *Oenopota reticulatus* (Brown 1827); *Pleurotoma trevellianum* Turton 1834; *Oenopota trevellianum* (Turton 1834); *Lora trevelliana* (Turton 1834); *Mangilia trevelliana* (Turton 1834).

Type locality: Scarborough, England. Distribution: Circumboreal, including Arctic Alaska to Behm Canal, Alaska; White, Barents, Kara, and Laptev seas; 0–1447 m.

Curitoma violacea (Mighels and C. B. Adams, 1842).

Pleurotoma violacea Mighels and C. B. Adams 1842; *Pleurotoma bicarinata* Couthouy 1838; *Oenopota bicarinatus* (Couthouy 1838); *Pleurotoma violacea* Mighels and C. B. Adams 1842; *Oenopota beckii* (Møller 1842); *Oenopota nodulosus* (Krause 1885).

Type locality: Casco Bay, Maine. Distribution: Circumboreal, including Arctic Alaska to Sitka, Alaska; 0 to >1000 m.

Granotoma albrechti (Krause, 1885).

Bela albrechti Krause 1885; *Lora albrechti* (Krause 1885); *Oenopota albrechti* (Krause 1885).

Type locality: Plover Bay, Bering Strait. Distribution: Bering Strait to Port Etches, Alaska; Chukchi Sea; Sea of Japan; 3–900 m.

Granotoma krausei (Dall, 1886).

Bela krausei Dall 1886; *Lora krausei* (Dall 1886); *Oenopota krausei* (Dall 1886).

Type locality: Port Etches, Alaska. Distribution: Bering Sea; Sea of Japan; 17–140 m.

Kurtziella variegata (Carpenter, 1864). Tan mangelia.

Mangelia variegata Carpenter 1864; *Daphnella variegata* (Carpenter 1864); *Mangelia nitens* Carpenter 1864; *Mangilia pulchrior* Dall 1919.

Type locality: Santa Barbara, California. Distribution: Alaska to southern California; depth unknown.

Mangelia carlottae Dall, 1919. Queen Charlotte lora.

Type locality: Queen Charlotte Islands, British Columbia. Distribution: Aleutian Islands and Gulf of Alaska to British Columbia; 100–1602 m.

Mitromorpha gracilior (Tryon, 1884).

Daphnella gracilior Tryon 1884; *Cymakra gracilior* (Tryon 1884); *Mitromorpha intermedia* Arnold 1903.

Type locality: San Diego, California. Distribution: Forrester Island, Alaska, to San Diego, California; depth unknown.

Obesotoma miona (Dall, 1919).

Lora miona Dall 1919; *Propebela miona* (Dall 1919); *Oenopota miona* (Dall 1919).

Type locality: Boca de Quadra, Alaska. Distribution: Aleutian Islands to central California; 9–91 m.

Obesotoma robusta (Packard, 1866).

Bela robusta Packard 1866; *Oenopota raricostulata* Golikov 1985.

Type locality: Labrador, Canada. Distribution: Chukchi, Bering, and Okhotsk seas; Sea of Japan; Labrador; 7–660 m.

Obesotoma schantarica (Middendorff, 1849).

Bela schantarica Middendorff 1849.

Type locality: Not traced. Distribution: Southeastern Chukchi Sea; Bering and Okhotsk seas; Sea of Japan; 14.5–400 m.

Obesotoma simplex (Middendorff, 1849). Simple lora.

Pleurotoma simplex Middendorff 1849; *Lora simplex* (Middendorff 1849); *Oenopota simplex* (Middendorff 1849); *Oenopota laevigatus* (Dall 1871); *Oenopota morchi* (Leche 1878).

Type locality: Okhotsk Sea. Distribution: Point Barrow, Alaska, to the Pribilof Islands, Bering Sea; Okhotsk Sea; depth unknown.

Obesotoma tenuilirata (Dall, 1871).

Bela tenuilirata Dall 1871; *Oenopota tenuilirata* (Dall 1871); *Propebela tenuilirata* (Dall 1871); *Lora tenuilirata* (Dall 1871); *Oenopota tenuiliratus cymatus* (Dall 1919); *Lora tenuilirat cymata* (Dall 1919).

Type locality: Norton Sound, Alaska. Distribution: Beaufort Sea to Prince William Sound, Alaska; Sea of Japan; 0–210 m.

Remarks: Baxter (1987) suggested that this species might be a junior synonym of *Oenopota schantarica* (Middendorff 1849).

Obesotoma woodiana (Møller, 1842).

Defrancia woodiana Møller 1842; *Lora woodiana* (Møller 1842); *Oenopota woodiana* (Møller 1842).

Type locality: Greenland. Distribution: Circumboreal, including Arctic Alaska to St. Lawrence Island, Bering Sea; Barents Sea; 5–240 m.

Oenopota alaskensis (Dall, 1871).

Mangilia alaskensis Dall 1871; *Lora alaskensis* (Dall 1871); *Oenopota eriopis* (Dall 1919).

Type locality: Unga Island, Shumagin Islands, Alaska.

Distribution: Bering Strait to Puget Sound, Washington; 5–7 m.

Oenopota aleutica (Dall, 1871).
Mangilia aleutica Dall 1871.
Type locality: Unga Island, Shumagin Islands, Alaska. Distribution: Cape Sabine, Arctic Ocean to Strait of Juan de Fuca; depth unknown.

Oenopota althorpensis (Dall, 1919).
Lora althorpensis Dall 1919.
Type locality: Port Althorp, Alaska. Distribution: Alaska; type material was collected at 22 m.

Oenopota althorpi (Dall, 1919).
Mangilia althorpi Dall 1919.
Type locality: Granite Cove, Port Althorp, Alaska. Distribution: Known only from type locality; 18 m; rare.
Remarks: Baxter (1987) stated that this species might be a junior synonym of *O. sculpturata* (Dall 1887) but the matter remains unresolved.

Oenopota amiata (Dall, 1919).
Lora amiata Dall 1919.
Type locality: Belkoffski, Alaska. Distribution: Known only from type locality; 27–137 m; rare.

Oenopota chiachiana (Dall, 1919).
Lora chiachiana Dall 1919.
Type locality: Chiachi Islands. Distribution: Arctic Ocean to Chiachi Islands and Port Althorp, Alaska; depth unknown.

Oenopota crebricostata (Carpenter, 1864).
Mangelia crebricostata Carpenter 1864.
Type locality: Neah Bay, Washington. Distribution: Forrester Island, Alaska, to Puget Sound, Washington; shallow water (1–2 m).

Oenopota elegans (Møller, 1842).
Defrancia elegans Møller 1842; *Lora elegans* (Møller 1842).
Type locality: Greenland. Distribution: Arctic Alaska to St. Lawrence Island, Bering Sea; Arctic Canada; Barents, Kara, and western Laptev seas; New England; Greenland; Iceland; Norway; Barents Sea; 21–1203 m.

Oenopota excurvata (Carpenter, 1864).
Bela excurvata Carpenter 1864; *Granotoma excurvata* (Carpenter 1864); *Lora excurvata* (Carpenter 1864).
Type locality: Puget Sound, Washington. Distribution: Bristol Bay, Bering Sea, to Puget Sound; depth unknown.

Oenopota galgana (Dall, 1919).
Lora galgana Dall 1919.
Type locality: Bering Sea, north of Unalaska. Distribution: Known only from type locality; 642 m; rare.

Oenopota granitica (Dall, 1919).
Mangilia granitica Dall 1919.
Type locality: Granite Cove, Port Althorp, Alaska. Distribution: Known only from type locality; depth unknown; rare.

Oenopota harpa (Dall, 1885).
Bela harpa Dall 1885; *Lora harpa* (Dall 1885); *Bela schmidti* Friele 1886.
Type locality: Nunivak Island, Alaska. Distribution: Circumboreal, including Arctic Alaska to Queen Charlotte Islands; Chukchi, White, Barents, Kara, Laptev, and Japan seas; 6–324 m.

Oenopota healyi (Dall, 1919).
Lora healyi Dall 1919.
Type locality: Arctic Ocean north of Bering Sea. Distribution: Known only from type locality; depth unknown; rare.

Oenopota impressa (Beck in Mørch, 1869).
Pleurotoma impressa Mørch 1869; *Propebela impressa* (Mørch 1869); *Lora impressa* (Mørch 1869); *Nodotoma impressa* (Mørch 1869); *Oenopota sarsii* (A. E. Verrill 1880).
Type locality: Bellsound, Spitsbergen. Distribution: Circumboreal, including Arctic Alaska to Kodiak Island, Alaska; Barents, Kara, Laptev, Chukchi seas; Sea of Japan; Norway; 5–500 m.

Oenopota inequita (Dall, 1919).
Lora inequita Dall 1919; *Propebela inequita* (Dall 1919).
Type locality: Plover Bay, Bering Sea. Distribution: Beaufort Sea to Boca de Quadra, Alaska; Sea of Japan; 5–67.5 m.

Oenopota kiskana (Dall, 1919).
Lora Kiskana Dall 1919.
Type locality: Kiska Island, Aleutian Islands. Distribution: Kiska Island to Puget Sound, Washington; depth unknown.

Oenopota luetkeni (Dall, 1919).
Lora luetkeni Dall 1919.
Type locality: Port Etches, Alaska. Distribution: Known only from type locality; 18 m; rare.

Oenopota lutkeana (Krause, 1885).
Bela lutkeana Krause 1885; *Lora lutkeana* (Krause 1885).
Type locality: St. Lawrence Bay, Bering Strait. Distribution: Known only from type locality; depth unknown; rare.

Oenopota murdochiana (Dall, 1885).
Bela murdochiana Dall 1885; *Lora murdochiana* (Dall 1885).
Type locality: Cape Smythe, Arctic Ocean. Distribution: Point Barrow, Arctic Alaska, to Pribilof Islands, Bering Sea; 4–9 m.

Oenopota nunivakensis (Dall, 1919).
Mangilia nunivakensis Dall 1919.
Type locality: Bering Sea, near Nunivak Island. Distri-

bution: Known only from type locality; depth unknown; rare.

Remarks: Baxter (1987) stated that this species might be a junior synonym of *O. elegans* (Møller 1842).

Oenopota pavlova (Dall, 1919).
Lora pavlova Dall 1919.
Type locality: Pribilof Islands, Bering Sea. Distribution: Bering Sea; northern Sea of Japan; Sakhalin; 60–1805 m.

Oenopota pribilova (Dall, 1919).
Lora pribilova Dall 1919; *Propebela pribilova* (Dall 1919).
Type locality: Cape Lisburne, Arctic Ocean. Distribution: Arctic Ocean to Esteros Bay, California; depth unknown.

Oenopota pyramidalis (Ström, 1788).
Buccinum pyramidalis Ström 1788; *Fusus pleurotomarius* Couthouy 1838.
Type locality: East Greenland. Distribution: Point Barrow, Alaska, to Friday Harbor, Washington; Arctic Canada; Labrador to Martha's Vineyard; Gulf of St. Lawrence; Bay of Fundy; Greenland; North Atlantic to Svalbard; Arctic Russia; 0–2010 m; common.

Oenopota quadra (Dall, 1919).
Lora quadra Dall 1919.
Type locality: Unalaska, Aleutian Islands. Distribution: Aleutian Islands to Puget Sound, Washington; depth unknown.

Oenopota sculpturata (Dall, 1887).
Bela sculpturata Dall 1887; *Mangilia sculpturata* (Dall 1887).
Type locality: Aleutian Islands. Distribution: Aleutian Islands, Chiachi Islands, western Gulf of Alaska, to Port Etches, Alaska; depth unknown.

Oenopota solida (Dall, 1887).
Bela solida Dall 1887; *Lora solida* (Dall 1887).
Type locality: Kiska Harbor, Aleutian Islands. Distribution: Eastern Bering Sea to Puget Sound, Washington; depth unknown.

Oenopota tabulata (Carpenter, 1864).
Mangelia tabulata Carpenter 1864; *Lora tabulata* (Carpenter 1864); *Propebela tabulata* (Carpenter 1864).
Type locality: Neah Bay, Washington. Distribution: Sitka, Alaska to Monterey, California; depth unknown.

Oenopota tenuissima (Dall, 1919).
Lora tenuissima Dall 1919.
Type locality: Chernofski Harbor, Unalaska Island, Alaska. Distribution: Known only from type locality; 199 m; rare.

Ophiodermella cancellata (Carpenter, 1864). Cancellate snakeskin-snail.
Drillia cancellata Carpenter 1864; *Pleurotoma vancouverensis* E. A. Smith 1880; *Surcula rhines* Dall 1908 (unnecessary new name for *Drillia cancellata*); *Moniliopsis rhines*: Dall 1919; *Moniliopsis chacei* Berry 1941.
Type locality: Puget Sound, Washington. Distribution: Kachemak Bay in northern Gulf of Alaska to Tanner Bank, California; 50–500 m.

Propebela alitakensis (Dall, 1919).
Lora alitakensis Dall 1919; *Oenopota alitakensis* (Dall 1919).
Type locality: Unimak Island, Alaska. Distribution: Unimak Island to Alitak Bay, Kodiak Island, Alaska; eastern Kamchatka; 148 m.

Propebela arctica (Adams, 1855).
Bela arctica Adams 1855; *Oenopota arctica* (Adams 1855); *Obesotoma arctica* (Adams 1855); *Propebela viridula* (Møller) *fide* Sars 1878.
Type locality: Arctic Seas. Distribution: Arctic Alaska to the Shumagin Islands; Arctic Canada; White, Barents, Laptev, and Japan seas; Newfoundland; Greenland; Norway; Svalbard; 0–780 m.

Propebela fidicula (Gould, 1849).
Fusus fidicula Gould 1849; *Lora fidicula* (Gould 1849); *Oenopota fidicula* (Gould 1849); *Oenopota amiantus* (Dall 1919).
Type locality: Puget Sound, Washington. Distribution: Aleutian Islands to Puget Sound; Chukchi Sea; East Kamchatka; 16–200 m.

Propebela harpularia (Couthouy, 1838). Harp lora.
Fusus harpularius Couthouy 1838; *Oenopota harpularia* (Couthouy 1838); *Lora harpularia* (Couthouy 1838); *Oenopota roseus* (Lovén 1846); *Oenopota roseus* (Sars 1878).
Type locality: Massachusetts Bay. Distribution: Circumboreal, including Point Belcher, Arctic Ocean, to Puget Sound, Washington; throughout the Aleutian Islands; White, Barents, East Siberian seas, and Sea of Japan; 5–693 m.

Propebela mitrata (Dall, 1919).
Lora mitrata Dall 1919; *Oenopota mitrata* (Dall 1919).
Type locality: Port Clarence, Bering Strait. Distribution: Bering Strait to the Shumagin Islands, Alaska; Kuril Islands; Okhotsk Sea; Peter the Great Bay; 62–120 m.

Propebela nobilis (Møller, 1842). Noble lora.
Defrancia nobilis Møller 1842; *Oenopota nobilis* (Møller 1842); *Lora nobilis* (Møller 1842); *Bela nobilis* var. *brevispira* Loyning 1932.
Type locality: Greenland. Distribution: Circumboreal, including Arctic Alaska to Akutan Pass, Aleutian Islands; White, southeastern Barents, Laptev, Chukchi, and Japan seas; Greenland to Maine; 7–515 m.

Propebela popovia (Dall, 1919).
Lora popovia Dall 1919; *Oenopota popovius* (Dall 1919).

Type locality: Bristol Bay, Bering Sea. Distribution: Bristol Bay to Point Piños, California; western Kamchatka; 85 m.

Propebela rassina (Dall, 1919).

Lora rassina Dall 1919; *Oenopota rassina* (Dall 1919).

Type locality: Bristol Bay, Bering Sea. Distribution: Bering Sea; Bering Island; 42–70 m.

Propebela turricula (Montagu, 1803).

Murex turricula Montagu 1803; *Oenopota turricula* (Montagu 1803); *Lora turricula* (Montagu 1803).

Type locality: Sandwich, Kent. Distribution: Icy Cape, Arctic Ocean, to Puget Sound, Washington; Bristol Channel; western and eastern parts of England and Wales; Irish, Scottish, and Icelandic coasts; Barents and Kara seas; 9–347 m.

Propebela variabilis Bogdanov, 1990.

Type locality: Bering Island, Commander Islands. Distribution: Bering Strait; Commander and Middle Kuril Islands; 60–130 m.

Retidrillia willetti (Dall, 1919).

Suavodrillia willetti Dall 1919.

Type locality: Forrester Island, Alaska. Distribution: Known only from type locality; depth unknown; rare.

Suavodrillia kennicotti (Dall, 1871). Kennicott's Drill.

Drilllia kennicotti Dall 1871; *Clathrodrillia kennicotti* (Dall 1871); *Pleurotoma declivis* Martens 1880.

Type locality: North Harbor, Unga Island. Distribution: Bering Strait to the Aleutian Islands; Sea of Japan; 15–535 m.

Family Turridae

Aforia circinata (Dall, 1873). Keeled aforia.

Pleurotoma circinata Dall 1873; *Leucosyrinx circinata* (Dall 1873); *Leucosyrinx insignis* Jeffreys 1883; *Leucosyrinx nojimensis* Yokoyama 1920; *Turricula hondoana* Dall 1925; *Aforia hondoana* (Dall 1925); *Aforia diomedea* Bartsch 1945; *Aforia japonica* Bartsch 1945; *Aforia okhotskensis* Bartsch 1945; *Aforia chosenensis* Bartsch 1945; *Aforia sakhalinensis* Bartsch 1945; *Aforia minatoensis* Otuka 1949; *Aforia otohimei* Ozaki 1958.

Type locality: Nateekin Bay, Captain's Bay, Unalaska. Distribution: Arctic Alaska to the Strait of Juan de Fuca; Okhotsk Sea; 10–550 m; common.

Aforia crebristriata (Dall, 1908).

Irenosyrinx crebristriata Dall 1908.

Type locality: Sitka, Alaska. Distribution: Southern Alaska; type material collected in 2869 m.

Aforia goodei (Dall, 1890). Goode's aforia.

Leucosyrinx goodei Dall 1890; *Irenosyrinx goodei* (Dall 1890); *Leucosyrinx persimilis* Dall 1890; *Aforia leonis* (Dall 1908); *Aforia amycus* (Dall 1919); *Aforia blanca* (Dall 1919); *Leucosyrinx amycus* Dall 1919.

Type locality: Northwestern coast of Patagonia. Distribution: Southern Alaska to southern Chile; 1220–1950 m.

Aforia pacifica (Dall, 1908). Pacific aforia.

Irenosyrinx pacifica Dall 1908.

Type locality: Southwest of Sitka, Alaska. Distribution: Southern Alaska; type material collected in 2869 m.

Antiplanes beringi (Aurivillius, 1885).

Pleurotoma berengi Aurivillius 1887.

Type locality: ?Arctic. Distribution: Bering Sea, south of St. Lawrence Island to the Aleutian Islands east to the Shumagin Islands; depth unknown.

Antiplanes bulimoides Dall, 1919.

Spirotropis (Antiplanes) bulimoides (Dall 1919).

Type locality: Bowers Bank, Bering Sea. Distribution: Known only from type locality; 629 m; rare.

Antiplanes catalinae (Raymond, 1904).

Pleurotoma (Surcula) perversa Gabb 1865 (non Philippi 1847); *Antiplanes perversa*: Oldroyd 1927; *Pleurotoma catalinae* Raymond 1904; *Antiplanes major* Bartsch 1944; *Antiplanes voyi* [Gabb 1866 (*fide* Abbott 1974)]; *Antiplanes gabbi* Kantor and Sysoev 1991 [unnecessary new name for *Pleurotoma perversa* Gabb].

Type locality: Santa Catalina Island, California. Distribution: Southern Alaska to San Diego, California; 90–270 m.

Antiplanes piona (Dall, 1902).

Pleurotoma (Antiplanes) piona Dall 1902.

Type locality: Southern part of the Bering Sea. Distribution: Bering Sea and southern Alaska; 75–201 m.

Antiplanes thalea (Dall, 1902).

Pleurotoma (Antiplanes) thalea Dall 1902; *Antiplanes santarosana* Dall 1902; *Pleurotoma (Spirotropis) smithi* Arnold 1903 (non Forbes 1840); *Antiplanes rotula* Dall 1921 (new name for *Pleurotoma smithi* Arnold, non Forbes); *Antiplanes (Rectiplanes) willetti* Berry 1953.

Type locality: San Luis Obispo, California. Distribution: Petrel Bank, north of Semisopochnoi Island, Aleutian Islands, to Islas San Beniot, Baja California, Mexico; 130–400 m.

Antiplanes vinosus (Dall, 1874). Fat left-handed turrid.

Pleurotoma vinosa Dall 1874; *Antiplanes kamchatica* Dall 1919; *Pleurotoma contraria* Yokoyama 1926; *Antiplanes contraria* (Yokoyama 1926).

Type locality: Kiska Harbor, Great Kiska Island, Alaska. Distribution: Eastern Bering Sea to San Diego, California; Sea of Japan; 40–200 m.

Leucosyrinx kincaidi Dall, 1919. Kincaid's aforia.

Irenosyrinx kincaidi (Dall 1919); *Aforia kincaidi* (Dall 1919).

Type locality: Shelikof Strait, north of Kodiak Island, Alaska. Distribution: Bering Sea; Aleutian Islands and southern Alaska; 100–414 m.

Clade Heterobranchia

Informal Group Lower Heterobranchia

Superfamily Rissoelloidea

Family Rissoellidae

Rissoella alaskensis (Bartsch, 1907). Alaska risso.

Vitrinella alaskensis Bartsch 1907; *Skeneopsis alaskana* Dall 1919.

Type locality: Unalaska, Aleutian Islands. Pribilof Islands and Unalaska, Alaska; depth unknown.

Superfamily Mathildoidea

Family Mathildidae

Turritellopsis stimpsoni Dall, 1919. Needle turretsnail.

Turritella acicula Stimpson 1851 non Philippi 1836; *Turritellopsis acicula* (Stimpson 1851); *Turritellopsis acicula* var. *stimpsoni* Dall 1919.

Type locality: Nunivak Island, Port Etches, Shoal Bay, British Columbia, and San Diego, California. Distribution: Arctic seas to Baja California and Massachusetts; Barents, White, and Siberian seas; northern Sea of Japan; Peter the Great Bay; 2–241 m. Moderately common.

Superfamily Pyramidelloidea

Family Pyramidellidae

Aartsenia aleutica (Dall and Bartsch, 1909).

Odostomia (Amaura) arctica Dall and Bartsch 1909.

Type locality: Southwest of Hagemeister Island, Bering Sea. Distribution: Captain's Harbor to Amaknak Island, Unalaska, Alaska; Commander Islands and the Pacific Coast of Kamchatka Peninsula; to a depth of 100 m.

Liostomia eburnea (Stimpson, 1851).

Rissoa eburnea Stimpson 1851.

Type locality: Massachusetts Bay, off Cape Ann. Distribution: Chukchi and northern Bering seas; Barents Sea; 3–355 m.

Menestho truncatula Odhner, 1915.

Menestho semilaevis Okhner 1915.

Type locality: Greenland. Distribution: Chukchi, Barents, all Russian (except the White Sea) seas; western Bering and Okhotsk seas; 15–85 m.

Odostomia angularis Dall and Bartsch, 1907.

Odostomia minutissima Dall and Bartsch 1909; *Odostomia notilla* Dall and Bartsch 1909; *Odostomia raymondi* Dall and Bartsch 1909.

Type locality: Nanaimo, British Columbia. Distribution: Sitka, Alaska, to San Diego, California; intertidal zone to 64 m; common.

Odostomia arctica Dall and Bartsch, 1909.

Aartsenia arctica (Dall and Bartsch 1909).

Type locality: Hagemeister Island, Bering Sea. Distribution: Chukchi and Beaufort seas to Bristol Bay, Bering Sea; depth unknown.

Odostomia barkleyensis Dall and Bartsch, 1910.

Type locality: Barkley Sound, Vancouver Island, British Columbia. Distribution: Southern Alaska to British Columbia; depth unknown.

Odostomia beringi Dall, 1871.

Type locality: St. Michael, Norton Sound, Alaska. Distribution: Known only from type locality; depth unknown; rare.

Odostomia canfieldi Dall, 1908.

Type locality: Monterey, California. Distribution: Southern Alaska to southern California; shallow water.

Odostomia capitana Dall and Bartsch, 1909.

Type locality: Captain's Harbor, Unalaska, Alaska. Distribution: Captain's Harbor to Kodiak, Alaska; depth unknown.

Odostomia cassandra Bartsch, 1912.

Type locality: Skidegate, Queen Charlotte Islands, British Columbia. Distribution: Southwest Alaska to British Columbia; depth unknown.

Odostomia columbiana Dall and Bartsch, 1907.

Type locality: Victoria, Vancouver Island, British Columbia. Distribution: Southern Alaska to Puget Sound, Washington; depth unknown.

Odostomia cookeana Bartsch, 1910.

Type locality: Ellamar, Alaska. Distribution: Known only from type locality; depth unknown; rare.

Odostomia eldorana Bartsch, 1912.

Type locality: Kodiak Island, Alaska. Distribution: Known only from type locality; depth unknown; rare.

Odostomia elsa Dall and Bartsch, 1909.

Type locality: Kodiak Island, Alaska. Distribution: Known only from type locality; depth unknown.

Odostomia eyerdami Bartsch, 1927.

Odostomia (Evalea) eyerdami Bartsch 1927.

Type locality: Shuyak Strait, Afognak Island, Alaska. Distribution: Known only from type locality; depth unknown; rare.

Odostomia hypocurta Dall and Bartsch, 1909.

Menestho hypocurta (Dall and Bartsch 1909).

Type locality: Bristol Bay, Bering Sea, Alaska. Distribution: Known only from type locality and North Kuril Islands; 5–60 m; rare.

Odostomia iliuliukensis Dall and Bartsch, 1909.
Type locality: Iliuliuk Village, Captain's Bay, Unalaska, Alaska. Distribution: Known only from type locality; depth unknown; rare.

Odostomia inflata Carpenter, 1864.
Type locality: Neah Bay, Washington. Distribution: Southern Alaska to Monterey, California; depth unknown.

Odostomia kennerleyi Dall and Bartsch, 1907.
Type locality: Nanaimo, British Columbia. Distribution: Afognak Island, Alaska, to Monterey, California; depth unknown.

Odostomia killisnooensis Dall and Bartsch, 1909.
Type locality: Killisnoo, Alaska. Distribution: Known only from type locality; depth unknown; rare.

Odostomia krausei Clessin, 1900.
Type locality: Japan. Distribution: Kodiak to Killisnoo, Alaska; Japan; depth unknown.

Odostomia martensi Dall and Bartsch, 1906.
Type locality: Killisnoo, Alaska. Distribution: Known only from type locality; depth unknown; rare.

Odostomia nuciformis Carpenter, 1864. Nut-shaped odostome.
Odostomia avellana Carpenter 1864; *Odostomia orcia* Dall and Bartsch 1909; *Odostomia talpa* Dall and Bartsch 1909; *Odostomia nota* Dall and Bartsch 1909; *Odostoia pesa* Dall and Bartsch 1909; *Odostomia elsa* Dall and Bartsch 1909.
Type locality: Neah Bay, Washington. Distribution: Alaska to San Diego, California; shallow water; common.

Odostomia nunivakensis Dall and Bartsch, 1909.
Type locality: Nunivak Island, Alaska. Distribution: Known only from type locality; depth unknown; rare.

Odostomia quadrae Dall and Bartsch, 1910.
Type locality: Barkley Sound, Vancouver Island, British Columbia. Distribution: Drier Bay, Alaska, to Vancouver Island, British Columbia; depth unknown.

Odostomia sasnjuanensis Bartsch, 1920.
Type locality: Near San Juan Island, Puget Sound, Washington. Distribution: Alaska to San Juan Islands; depth unknown.

Odostomia septentrionalis Dall and Bartsch, 1909.
Type locality: Unalaska, Alaska. Distribution: Known only from type locality; depth unknown; rare.

Odostomia sillana Dall and Bartsch, 1909.
Type locality: West of Amaknak Island, Unalaska, Alaska. Distribution: Captain's Bay, Unalaska; depth unknown.

Odostomia skidegatensis Bartsch, 1912.
Type locality: Skidegate, Queen Charlotte Islands, British Columbia. Distribution: Southern Alaska to California; depth unknown.

Odostomia tenuisculpta Carpenter, 1864. Fine-sculptured odostome.
Odostomia straminea Carpenter 1865; *Odostomia jewetti* Dall and Bartsch 1907; *Odostomia phanea* Dall and Bartsch 1907; *Odostomia tillamookensis* Dall and Bartsch 1907; *Odostomia amchitkana* Dall and Bartsch 1909; *Odostomia baranoffensis* Dall and Bartsch 1909; *Odostomia clesseni* Dall and Bartsch 1909; *Odostomia kadiahkensis* Dall and Bartsch 1909; *Odostomia obesa* Dall and Bartsch 1909; *Odostomia santarosana* Dall and Bartsch 1909; *Odostomia socorroensis* Dall and Bartsch 1909.
Type locality: Neah Bay, Washington. Distribution: Alaska to Baja California; throughout the Aleutian Islands; western Bering Sea; intertidal zone to 55 m; common.

Odostomia unalaskensis Dall and Bartsch, 1909.
Type locality: Captain's Harbor, Unalaska, Alaska. Distribution: Known only from the type locality; depth unknown; rare.

Odostomia vancouverensis Dall and Bartsch, 1910.
Type locality: Barkley Sound, Vancouver Island, British Columbia. Distribution: Southern Alaska to Vancouver Island; depth unknown.

Odostomia willetti Bartsch, 1917.
Type locality: Waterfall Cannery, west side of Prince of Wales Island, Alaska. Distribution: Alaska to Queen Charlotte Islands, British Columbia; depth unknown.

Turbonilla alaskana Dall and Bartsch, 1909.
Type locality: St. Paul, Kodiak, Alaska. Distribution: Kodiak to Sitka, Alaska; shallow water.

Turbonilla canadensis Bartsch, 1917.
Type locality: Forrester Island, Alaska. Distribution: Known only from type locality; depth unknown; rare.

Turbonilla eschscholtzi Dall and Bartsch, 1907.
Type locality: Carter Bay, British Columbia. Distribution: Alaska to British Columbia; shallow water.

Turbonilla eyerdami Bartsch, 1927.
Type locality: Afognak Island, Alaska. Distribution: Known only from type locality; depth unknown; rare.

Turbonilla lituyana Dall and Bartsch, 1909.
Type locality: Lituya Bay, Alaska. Distribution: Known only from type locality; depth unknown; rare.

Turbonilla lordii (E. A. Smith, 1880).
Chimnitzia lordi E. A. Smith 1880.
Type locality: Vancouver Island, British Columbia. Distribution: Sitka, Alaska, to Puget Sound, Washington; shallow water.

Turbonilla middendorffi Bartsch, 1927.
Type locality: Afognak Island, Alaska. Distribution: Known only from type locality; depth unknown; rare.

Turbonilla pesa Dall and Bartsch, 1910.
Type locality: Barkley Sound, Vancouver Island, British Columbia. Distribution: Southern Alaska to Washington; shallow water.

Turbonilla shuyakensis Bartsch, 1927.
Type locality: Shuyak Strait, Afognak Island, Alaska. Distribution: Known only from type locality; depth unknown; rare.

Turbonilla stelleri Bartsch, 1927.
Type locality: Afognak Island, Alaska. Distribution: Known only from type locality; depth unknown; rare.

Turbonilla stylina (Carpenter, 1864). Many-named turbonille.
Chemnitzia stylina Carpenter 1864; *Turbonilla asser* Dall and Bartsch 1909; *Turbonilla calvini* Dall and Bartsch 1909; *Turbonilla galianoi* Dall and Bartsch 1909; *Turbonilla humerosa* Dall and Bartsch 1909; *Turbonilla nicholsi* Dall and Bartsch 1909; *Turbonilla profundicola* Dall and Bartsch 1909.
Type locality: Santa Barbara, California. Distribution: Alaska to Mexico; shallow water.

Turbonilla taylori Dall and Bartsch, 1907.
Type locality: Departure Bay, British Columbia. Distribution: Southern Alaska to Washington; depth unknown.

Turbonilla torquata (Gould, 1853). Vancouver turbonille.
Chimnitzia torquata Gould 1853.
Type locality: Santa Barbara, California. Distribution: Alaska to southern California; shallow water.

Informal Group Opisthobranchia—The Nudibranchs, Bubble Shells, Headshield Slugs, Sea Hares, Sea Angels, and Sea Butterflies

The opisthobranchs (sea slugs and related groups) are a diverse group of marine gastropods occupying a great variety of ecological niches, with many noted for their beautiful coloration. They exhibit an evolutionary trend toward the reduction, internalization, and complete loss of the shell. Due to their lack of a shell, they have adopted strategies such as mimicry to avoid predation. Members of the superfamily Aeolidinoidea pirate the stinging cells from their cnidarian prey and use them in their own defense. There are more than 6000 described species (Behrens and Hermosillo, 2005), with approximately 100 species occurring in Alaskan waters. Our knowledge of Alaskan nudibranchs is woefully inadequate, and we frequently encounter specimens that we cannot confidently assign to species. Until recently the Sea Slug Forum, http://www.seaslugforum.net/, was a useful resource for information, queries, and identifications. However, due to a lack of funding, technical assistance was terminated in 2010, although a static version of the site is still available.

Clade Cephalaspidea

Superfamily Acteonoidea

Family Acteonidae

Rictaxis punctocaelatus (Carpenter, 1864). Striped barrel or Carpenter's baby-bubble shell.
Acteon punctocoelata Carpenter 1864; *Tornatella punctoacaelata* (Carpenter 1864); *Acteon punctocoelatus vancouverensis* Oldroyd 1927; *Rictaxis vancouverensis* (Oldroyd 1927).
Type locality: Santa Cruz, California. Distribution: Southern Alaska to Baja California, Mexico; intertidal zone to 100 m.
Remarks: Mikkelsen (1996) proposed moving the family Acteonidae from the Opisthobranchia to the Gastropod Heterobranchia clade but Behrens (2004) did not support that move.

Superfamily Philinoidea

Family Cylichnidae

Acteocina cerealis (Gould, 1852). Grain barrel-bubble.
Bulla cerealis Gould 1852; *Cylichnella cerealis* (Gould 1852).
Type locality: California. Distribution: Southern Alaska to southern California; shallow water.
Remarks: Abbott (1974) stated that this species might be a junior synonym of *A. culcitella* (Gould 1852).

Acteocina culcitella (Gould, 1852). Western or pillow barrel-bubble.
Bulla (Tornatina) culcitella Gould 1852.
Type locality: Santa Barbara, California. Distribution: Kodiak Island to California; intertidal zone to 46 m; fairly common.

Acteocina eximia (Baird, 1863). Intermediate barrel-bubble.
Bullina (Tornatina) eximia Baird 1863; *Acteocina intermedia* Willett 1928.
Type locality: Esquimalt Harbor, Vancouver Island, British Columbia. Distribution: Southern Alaska to California; 18–289 m; fairly common.

Acteocina harpa (Dall, 1871). Harp baby-bubble.
Retusa harpa Dall 1871; *Cylichnella harpa* (Dall 1871).

Type locality: Monterey, California. Distribution: Forrester Island, Alaska, to San Diego, California; depth unknown.

Cylichna alba (T. Brown, 1827). White chalice-bubble or Brown's barrel-bubble.

Cylichnella alba T. Brown 1827; *Cylichna consobrina* Gould 1859; *Haminoea grisea* E. A. Smith 1875; *Retusa toyamaensis* (Habe 1955).

Type locality: Greenock, England. Distribution: Circumboreal, including Arctic Ocean to California; northern Sea of Japan; White Sea; intertidal zone to 2222 m.

Cylichna attonsa Carpenter, 1864. Small bubble.

Cylichnella attonsa Carpenter 1864.

Type locality: Puget Sound, Washington. Distribution: Southern Alaska to Baja California, Mexico; subtidal zone to 73 m.

Cylichna nucleolus (Reeve, 1855). Kernel chalice-bubble.

Bulla nucleola Reeve 1855; *Cylichnella nucleola* (Reeve 1855).

Type locality: North of Beechy's Island, Arctic Ocean. Distribution: Circumboreal, including Arctic Alaska to Kodiak Island, Alaska; depth unknown.

Cylichna occulta (Mighels and Adams, 1842). Concealed-chalice bubble.

Bulla occulta Mighels and Adams 1842; *Cylichnella occulta* (Mighels and Adams 1842); *Cylichnoides occulta* (Mighels and Adams 1842); *Bulla reinhardi* Holboll in Moller 1842; *Cylichna scalpta* Reeve 1855.

Type locality: Westbrook, Maine. Distribution: Circumboreal, including Point Barrow, Alaska, to the Aleutian Islands; White Sea; northern Sea of Japan; Okhotsk Sea; 0–323 m.

Scaphander willetti Dall, 1919.

Type locality: Forrester Island, Alaska. Distribution: Southern Alaska; depth unknown.

Family Philinidae

Philine polaris Aurivillius, 1885. Axial paper-bubble.

Type locality: Beaufort Sea. Distribution: Arctic Alaska to Nanaimo, Vancouver Island, British Columbia; throughout the Aleutian Islands; 15 and 16 m.

Philine sinuata Stimpson, 1851. Sinuate paper-bubble.

Type locality: Broad Bay, Boston Harbor. Distribution: Bering Strait, Alaska; Maine to Connecticut; 7–13 m; uncommon.

Remarks: Kantor and Sysoev (2006) considered this species to be a junior synonym of *Philine denticulata* J. Adams 1800.

Family Aglajidae

Aglaja ocelligera (Bergh, 1893). Eyespot or spotted aglaja.

Doridium ocelligera Bergh 1893; *Navanax ocelligera* (Bergh 1893); *Chelidonura ocelligera* (Bergh 1893); *Doridium adellae* (Dall 1894); *Aglaja phocae* (Marcus 1961).

Type locality: Sitka Harbor, Alaska. Distribution: Southern Alaska to southern California; subtidal zone to 20 m.

Melanochlamys diomedea (Bergh, 1893). Albatross or diomedes' aglaja.

Doridium diomedia Bergh 1893; *Aglaja diomedea* (Bergh 1893); *Melanochlamys ezoensis* (Baba 1957); *Melanochlamys nana* (Steinberg and Jones 1959).

Type locality: Kodiak Island, Alaska. Distribution: Alaska to southern California; Peter the Great Bay; southern Sakhalin; southern Kuril Islands; intertidal zone to 112 m; common.

Family Gastropteridae

Gastropteron pacificum Bergh, 1894. Pacific batwing or winged seaslug.

Gastropteron cinereum Dall 1925; ?*Gastropteron japonicum* Tokioka and Baba 1964.

Type locality: Unalaska, Aleutian Islands. Distribution: Alaska to Baja California, Mexico; Kuril Islands; intertidal zone to 425 m; uncommon.

Family Retusidae

Retusa chukchii Chaban, 2008.

Type locality: Southeast of Wrangel Island, Chukchi Sea. Distribution: Chukchi Sea; Wrangel Island; Gavai Bay; Rogers Bay; depth unknown.

Retusa obtusa (Montagu, 1803). Arctic barrel-bubble.

Bulla obtusa Montagu 1803; *Bulla alba* Turton 1825; *Bulla plicata* Brown 1827; *Retusa turrita* Möller 1842; *Retusa obtusa* var. *turrita* (Möller 1842); *Bulla pertenuis* Mighels 1843; *Retusa pertenuis* (Mighels 1843).

Type locality: England. Distribution: Circumboreal, including Arctic Ocean to St. Matthew Island, Alaska; shallow to 530 m; common.

Retusa semen Reeve, 1855.

Type locality: Port Refuge, Novaya Zemlya. Distribution: Arctic Ocean; southern Alaska; depth unknown.

Retusa umbilicata (Montagu, 1803).

Bulla umbilicata Montagu 1803; *Cylichnina umbilicata* (Montagu 1803); *Retusa subcylindrica* (Brown 1827); *Retusa strigella* (Lovén 1846).

Type locality: Falmouth Harbor. Distribution: Southern Alaska and North Atlantic; western Crimea; Black Sea; shallow water.

Superfamily Diaphanoidea

Family Diaphanidae

Bogasonia gorjachevi Chaban, 1998.

Type locality: Middle Kuril Islands. Distribution: Pacific high boreal-Arctic; Point Barrow, Chukchi Sea; Laptev Sea; Simushir Island; depth unknown.

Bogasonia volutoides Warén, 1989.

Type locality: Iceland. Distribution: Chukchi Sea; Iceland; depth unknown.

Diaphána brunnea Dall, 1919. Brown paperbubble.

Type locality: Harbor of St. Paul, Kodiak Island, Alaska. Distribution: Southern Alaska to Washington; depth unknown.

Diaphana glacialis Odhner, 1907.

Bulla subangulata: Møller 1842 (in part); *Diaphana hyalina*: Odhner 1910, Lemche 1938 (in part); *Diaphana minuta*: Lemche 1941 (major part), G. E. MacGinitie 1955, G. E. MacGinitie 1959; *Diaphana (Amphisphyra) globosa*: Chaban 1996.

Type locality: Mosselbay, Svalbard. Distribution: Arctic circumpolar, including the Beaufort Sea; to a depth of 240 m.

Diaphana minuta Brown, 1827. Arctic paperbubble.

Diaphana candida Brown 1827; *Diaphana pellucida* Brown 1827; *Bulla hyalina* Turton 1834; *Diaphana hyalina* (Turton 1834); *Bulla debilis* Gould 1840; *Bulla subangulata* Möller 1842; *Amphisphyra expansa* Jeffreys 1865; *Diaphana expansa* (Jeffreys 1865); *Diaphana hyalina spirata* Odhner 1907; *Diaphana watanabei* Habe 1976.

Type locality: Loch Torrido, Scotland. Distribution: Arctic Alaska to southern Alaska; Arctic Atlantic to Connecticut; Europe; White and Barents seas; Peter the Great Bay; Kuril and Commander islands; southeastern Kamchatka; 2–350 m.

Superfamily Haminoeoidea

Family Haminoeidae

Haminoea vesicula (Gould, 1855). Blister glassy-bubble or white bubble shell.

Bulla vesicula Gould 1855; *Haminea vesicula* (Gould 1855).

Type locality: San Diego, California. Distribution: Southern Alaska to Baja California, Mexico; intertidal to shallow subtidal zones; common.

Haminoea virescens (G. B. Sowerby II, 1833). Green glassy-bubble.

Bulla virescens G. B. Sowerby II 1833; *Haminoea olgae* Dall 1919; *Haminoea cymbiformis* Carpenter 1857; *Haminoea strongi* Baker and Hanna 1927; *Haminoea rosacea* Spicer 1933.

Type locality: Pitcairn Island. Distribution: Alaska to Baja California; intertidal zone.

Clade Thecosomata

Superfamily Cavolinioidea

Family Cavoliniidae

Clio pyramidata Linnaeus, 1767. Pyramid clio or sea angel.

Euclio pyramidata (Linnaeus 1767); *Cleodora pyramidata* (Linnaeus 1767); *Clio lamartinieri* (*fi de* Gray 1850); *Cleodora exacuta* Gould 1852.

Type locality: North Atlantic. Distribution: Worldwide; pelagic.

Diacria trispinosa (de Blainville, 1821). Three-spine cavoline.

Cavolina trispinosa de Blainville 1821.

Type locality: Not traced. Distribution: Worldwide, including Gulf of Alaska; pelagic.

Family Limacinidae

Limacina helicina (Phipps, 1774). Helicid pteropod.

Spiratella helicina Phipps 1774; *Spiratella pacifica* Dall 1871; *Spiratella acuta* van der Spoel 1967.

Type locality: Arctic seas. Distribution: Circum-boreal, including northern Alaska to Baja California, Mexico; Barents, White, and Chukchi seas; pelagic to 100 m; common.

Clade Gymnosomata

Superfamily Clionoidea

Family Clionidae

Clione limacina (Phipps, 1774). Common clione.

Clione papillonacea Jeffreys 1869; *Clione elegantissima* Dall 1871; *Clione kincaidi* Agersborg 1923; *Trichocyclus hansineensis* Agersborg 1923.

Type locality: Arctic Ocean. Distribution: Cosmopolitan in cold and temperate seas, including northern Alaska to Baja California, Mexico; Barents, White, Kara, Laptev, Chukchi, Bering, Okhotsk, and Japan seas; pelagic to 600 m.

Family Pneumodermatidae

Pneumoderma violaceum pacificum Dall, 1871.

Pneumoderma atlanticum pacificum (Dall 1871).

Type locality: North Pacific Ocean (37°8′N, 136°10′W). Distribution: Worldwide; pelagic.

Pneumoderma violaceum violaceum (d'Orbigny, 1836).

Pneumoderma atlanticum atlanticum (Oken 1815).

Type locality: Not traced. Distribution: Worldwide; pelagic.

Clade Sacoglossa

Subclade Placobranchacea

Superfamily Limapontioidea

Family Limapontiidae

Alderia modesta (Lovén, 1844). Modest alderia.

Stiliger modestus Lovén 1844; *Alderia amphibia* Allman 1845; *Alderia scaldiana* Nyst 1855; *Alderia harvardiensis* Gould 1870.

Type locality: Bohuslan, Karingon, Sweden. Distribution: Prince William Sound, Alaska to Baja California, Mexico; New England; British Isles; Norway to France; White Sea; Peter the Great Bay; shallow water; common.

Olea hansineensis Agersborg, 1923. Hansine seaslug.

Type locality: Friday Harbor, San Juan Island, Washington. Distribution: Prince William Sound, Washington to San Clemente Island, California; shallow water; common in bays.

Placida dendritica (Alder and Hancock, 1843). Spanish tenor.

Calliopaea dendritica Alder and Hancock 1843; *Hermaea dendritica* (Alder and Hancock 1843); *Hermaea aoteana* Powell 1937; *Placida aoteana* (Powell 1937); *Hermaea ornata* MacFarland 1966.

Type locality: Torbay, England. Distribution: Bertha Bay, Chichagof Island, Alaska, to Baja California, Mexico; North Carolina; New England area; Mediterranean Sea; eastern Atlantic; Japan; Barents Sea; found in outer tidepools.

Stiliger fuscovittatus Lance, 1962. Brown-streak stiliger.

Ercolania fuscovittata (Lance 1962).

Type locality: Mission Bay, San Diego, California. Distribution: Southern Alaska to the Gulf of California; shallow water; seasonally common from April through June.

Family Hermaeidae

Aplysiopsis enteromorphae (Cockerell and Eliot, 1905). Green alga sacoglossid.

Phyllobranchus enteromorphae Cockerell and Eliot 1905; *Hermaeina smithi* Marcus 1961.

Type locality: San Pedro, California. Distribution: Southern Alaska to northern Mexico; intertidal and subtidal zones.

Clade Nudipleura

Subclade Pleurobranchomorpha

Superfamily Pleurobranchoidea

Family Pleurobranchidae

Berthella californica (Dall, 1900). California sidegill slug.

Pleurobranchus californicus Dall 1900; *Pleurobranchus californius denticulatus* MacFarland 1966.

Type locality: San Pedro, California. Distribution: Southern Alaska to Baja California, Mexico; Siberia; ?Galapagos Islands; Commander Islands; Sea of Japan; intertidal zone to 33 m; common.

Subclade Nudibranchia

Clade Euctenidiacea

Subclade Doridacea

Superfamily Doridoidea

Family Dorididae

Doris montereyensis (Cooper, 1863). Monterey sea-lemon.

Archidoris montereyensis Cooper 1863; *Archidoris nyctea* (Bergh 1900).

Type locality: Monterey Bay, California. Distribution: Southern Alaska to southern California; intertidal zone to 256 m; common.

Doris odhneri MacFarland, 1966. White night doris.

Archidoris odhneri (MacFarland 1966); *Austrodoris odhneri* (MacFarland).

Type locality: Monterey Bay, California. Distribution: Eastern Bering Sea to California; intertidal zone to 50 m.

Family Chromodorididae

Cadlina luteomarginata MacFarland, 1966. Yellow-edge cadlina.

Cadlina marginata MacFarland 1905.

Type locality: Monterey Bay, California. Distribution: Southern Alaska to Baja California, Mexico; intertidal zone to 45 m; common.

Cadlina modesta MacFarland, 1966. Modest cadlina.

Type locality: Point Piños, Monterey Bay, California. Distribution: Southern Alaska to southern California; intertidal zone to 50 m.

Family Discodorididae

Diaulula sandiegensis (Cooper, 1863). Leopard or ringed dorid.

Doris sandiegensis Cooper 1863; *Discodoris sandiegensis* (Cooper 1863); *Doris odonoghuei* Steinberg 1963; *Diaulula* sp. 1: Behrens 1991.

Type locality: San Diego, California. Distribution: North Alaska to Baja California, Mexico; Commander Islands; southern Kuril Islands; Sea of Japan; intertidal zone to 72 m; moderately common.

Geitodoris heathi (MacFarland, 1905). Gritty or Heath's dorid.

Discodoris heathi MacFarland 1905; *Discodoris fulva* O'Donoghue 1924.

Type locality: Pt. Piños, Monterey Bay, California. Distribution: Central Alaska to Baja California, Mexico; intertidal zone to 20 m; common.

Peltodoris lentiginosa (Millen, 1982). Mottled or freckled pale sea-lemon.

Anisodoris lentiginosa Millen 1982; *Diaulula lentiginosa* (Millen 1982); *Montereina lentiginosa* (Millen 1982).

Type locality: Dixon Island, Barkley Sound, British Columbia. Distribution: Central Alaska to southern Oregon; intertidal zone to 33 m.

Remarks: Behrens (2004) states that the generic position of this species still needs further investigation.

Peltodoris nobilis (MacFarland, 1905). Noble sea lemon.

Montereina nobilis MacFarland 1905; *Anisodoris nobilis* (MacFarland 1905).

Type locality: Monterey Bay, California. Distribution: Central Alaska to Baja California, Mexico; intertidal zone to 228 m; moderately common.

Family Akiodorididae

Akiodoris lutescens Bergh, 1880.

Type locality: Nazan Bay, Atka Island, Aleutian Islands.

Distribution: Aleutian and Commander Islands; Kamchatka Peninsula; Kuril Islands; 10–160 m.

Superfamily Onchidoridoidea

Family Onchidorididae

Acanthodoris atrogriseata O'Donoghue, 1927.

Type locality: Vancouver Island, British Columbia. Distribution: North Alaska to central California; depth unknown.

Acanthodoris hudsoni MacFarland, 1905. Hudson's dorid or Hudson's yellow margin nudibranch.

Type locality: Monterey Bay, California. Distribution: Southern Alaska to southern California; intertidal zone to 25 m; rare.

Acanthodoris nanaimoensis O'Donoghue, 1921. Wine-plumed spiny doris or Nanaimo nudibranch.

Acanthodoris columbina MacFarland 1926.

Type locality: Nanaimo, British Columbia. Distribution: Central Alaska to southern California; intertidal zone to 25 m; common in summer.

Adalaria jannae Millen, 1987. Janna's adalaria.

Type locality: Tyee Point, Cooper Cove, British Columbia. Distribution: Prince William Sound, Alaska, to southern California; eastern Russia; Sea of Japan; shallow subtidal zone.

Adalaria proxima (Alder and Hancock, 1854). Yellow false doris or white adalaria.

Doris proxima Alder and Hancock 1854; *Adalaria albopapillosa* (Dall 1871); *Adalaria pacifica* Bergh 1880; *Adalaria virescens* Bergh 1880.

Type locality: Birkenhead, Great Britain. Distribution: Circumboreal; north Alaska to southern British Columbia; Norway to Britain; Greenland to New England; Sea of Japan; Barents, White, Kara, and Laptev seas; intertidal zone to 102 m; common.

Calycidoris guentheri Abraham, 1876.

Doris (Adalaria) sibirica Aurivillius 1887.

Type locality: Not stated. Distribution: Widespread in the Arctic Ocean from the Barents Sea to the Chukchi Sea and Bering Strait; Beaufort Sea to Liverpool Bay, Western North Territory; Bering Sea; 9–270 m.

Corambe pacifica MacFarland and O'Donoghue, 1929. Frost-spot corambe.

Doridella pacifica (MacFarland and O'Donoghue 1929); *Gulinia pacifica* (MacFarland and O'Donoghue 1929); *Quasicorambe pacifica* (MacFarland and O'Donoghue 1929).

Type locality: Monterey Bay, Pacific Grove, California. Distribution: Southern Alaska to Baja California, Mexico; intertidal and subtidal zones.

Corambe steinbergae (Lance, 1962). Cryptic nudibranch or Steinberg's dorid.

Corambella steinbergae Lance 1962; *Doridella steinbergae* (Lance 1962); *Paracorambe steinbergae* (Lance 1962); *Suhinia steinbergae* (Lance 1962); *Corambella bolini* MacFarland 1966.

Type locality: San Diego, California. Distribution: Northern Gulf of Alaska to Baja California, Mexico; intertidal and subtidal zones; common in summer.

Diaphorodoris lirulatocauda Millen, 1985.

Onchidoris hystricina (Bergh 1878): Beeman and Williams 1980 (non Bergh), Behrens 1980 (non Bergh), McDonald and Nybakken 1981 (non Bergh), Nybakken and McDonald 1981 (non Bergh), McDonald 1983 (non Bergh), Jaeckle 1984 (non Bergh), Behrens 1991 (non Bergh).

Type locality: Earls Cove, British Columbia. Distribution: Southern Alaska to Baja California, Mexico; intertidal and subtidal zones.

Loy thompsoni (Millen and Nybakken, 1991).

Corambe thompsoni Millen and Nybakken 1991; *Psammodoris thompsoni* (Millen and Nybakken 1991).

Type locality: Vancouver Island, British Columbia. Distribution: Bristol Bay, Alaska, to California; subtidal zone; rare.

Onchidoris bilamellata (Linnaeus 1767). Barnacle-eating onchidoris.

Doris bilamellata Linnaeus 1767; *Lamellidoris bilamellata* (Linnaeus 1767); *Doris fusca* Müller 1776; *Lamellidoris fusca* (Müller 1776); *Onchidoris fusca* (Müller 1776).

Type locality: Norwegian Sea. Distribution: Circumboreal; north Alaska to Baja California, Mexico; Sea of Japan; Greenland to Connecticut; western Russia to France; intertidal zone to 50 m; common.

Onchidoris muricata (O. F. Müller, 1776). Fuzzy onchidoris.

Doris muricata O. F. Müller 1776; *Lamellidoris muricata* (O. F. Müller 1776); *Lamellidoris aspera* Alder and Henderson 1842; *Lamellidoris diaphana* (Adler and Hancock 1845).

Type locality: Norway and Denmark. Distribution: Circumboreal; north Alaska to southern California; Greenland to Connecticut; Russia to France; Barents and White seas; Commander Islands; Kamchatka; intertidal zone to 20 m; rare.

Family Goniodorididae

Ancula gibbosa (Risso, 1818). Atlantic ancula.

Polycera cristata Alder 1841; *Ancula pacifica* MacFarland 1905.

Type locality: Nice, France. Distribution: Prince William Sound, Alaska, to San Diego, California; from the western Mediterranean around the northern Atlantic coast to the White Sea, Greenland, and Iceland and across the New England coast of North America; Barents and White seas; Commander Islands; South Kuril Islands; intertidal and subtidal zones.

Superfamily Polyceroidea

Family Polyceridae

Colga pacifica (Bergh, 1894).

Issa lacera pacifica Bergh 1894; *Issena pacifica* (Bergh 1894); *Triopa camtchatica* Volodchenko 1941; *Issena abildgaardii* Pruvot-Fol 1954.

Type locality: Unimak Island, Aleutian Islands. Distribution: Alaska; Aleutian Islands; southern Kuril Islands; southwest Greenland; 90–275 m.

Limacia cockerelli (MacFarland, 1905). Orange spotted or Cockerell's nudibranch.

Laila cockerelli MacFarland 1905.

Type locality: Monterey Bay, California. Distribution: Southern Alaska to Baja California, Mexico; intertidal zone to 35 m.

Palio dubia (M. Sars, 1829). Banded polycera.

Polycera dubia M. Sars 1829; *Polycera lessonii* d'Orbigny 1837; ?*Polycera nothus* Johnston 1838; *Polycera citrina* Alder and Hancock 1841; *Polycera modesta* Lovén 1846; ?*Polycera pallida* Bergh 1880; *Polycera zosterae* O'Donoghue 1924.

Type locality: Bergen, North Sea. Distribution: Boreo-Arctic; North Atlantic; European and North American coasts, south to California in the eastern Pacific; intertidal and subtidal zones.

Palio pallida Bergh, 1880.

Type locality: Kiska Harbor, Aleutian Islands. Distribution: Known only from type locality; 18 m; rare.

Polycera tricolor Robilliard, 1971. Three-color polycera.

Type locality: Barkley Sound, British Columbia. Distribution: Southern Alaska to Baja California, Mexico; subtidal zone to 60 m.

Triopha catalinae (Cooper, 1863). Sea-clown triopha.

Triopa catalinae Cooper 1863; *Triopa carpenteri* Stearns 1873; *Triopha modesta* Bergh 1880; *Triopha scrippsiana* Cockerell 1915; *Triopha elioti* O'Donoghue 1921.

Type locality: Santa Catalina Island, California. Distribution: Shemya Island, Aleutian Islands, to Baja California, Mexico; Sea of Japan; Commander Islands; intertidal zone to 80 m; common.

Family Aegiretidae

Aegires albopunctatus MacFarland, 1905. Salt and pepper doris.

Type locality: Monterey Bay, California. Distribution: Ketchikan, Alaska to Baja California, Mexico; subtidal zone to 30 m.

Clades Dexiarchia and Cladobranchia

Subclade Dendronotida

Superfamily Tritonioidea

Family Tritoniidae

Tochuina gigantea (Bergh, 1904). Giant orange or orange-peel nudibranch.

Tritonia gigantea Bergh 1904; *Tochuina tetraquetra* (Pallas): Bergh 1879.

Type locality: Unalaska, Aleutian Islands. Distribution: Aleutian Islands; Gulf of Alaska; Russia (Martynov[8]); depth unknown; common throughout its range in Alaska.

Remarks: There are records of this species in the

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[8] Martynov, A. V. 2009. Opisthobranch Mollusca of Russia: The neglected diversity of cold waters. Abstracts and Papers from the 39th Annual Meeting of the Western Society of Malacologists. The Western Society of Malacologists, Annual Report, 39:22–23.

Chukchi and eastern Bering seas in NMFS, AFSC, RACE survey database, 2012 (listed as *Tochuina tetraquetra*).

Tritonia festiva (Stearns, 1873). Diamondback tritonia.

Lateribranchiaea festiva Stearns 1873; *Tritoniella festiva* (Stearns 1873); *Tritonia reticulata* Bergh 1882; *Sphaerostoma undulata* O'Donoghue 1924; *Duvaucelia festiva*: MacFarland 1966.

Type locality: Pt. Pinos, Monterey, California. Distribution: Northern Gulf of Alaska (Kachemak Bay) to Baja California, Mexico; Japan; intertidal zone to 50 m; rare.

Tritonia tetraquetra (Pallas, 1788). Pale pink or rosy tritonid.

Limax tetraquetra Pallas 1788; *Tochuina tetraquetra* (Pallas 1788); *Duvaucelia tetraquetra* (Pallas 1788); *Sphaerostoma tetraquetra* (Pallas 1788); *Tritoniopsis tetraquetra* (Pallas 1788); *Tritonia diomedea* Bergh 1894; *Tritonia aurantia* Mattox 1955.

Type locality: Kuril Islands. Distribution: Kuril, Commander, and Aleutian Islands to Bay of Panama; eastern Bering Sea; Sea of Japan; Manatee Bay, Florida; subtidal zone to 363 m; common throughout its range in Alaska.

Remarks: The synonymization of *T. diomedea* was recent (Martynov[8]). There are records of this species in the Chukchi and eastern Bering seas in NMFS, AFSC, RACE survey database, 2012 (listed as *Tritonia diomedea*).

Family Dendronotidae

Dendronotus albus MacFarland, 1966. White frond-aeolis or white dendronotid.

Dendronotus diversicolor (Robilliard 1970).

Type locality: Monterey, California. Distribution: Central Alaska to Baja California, Mexico; intertidal zone to 30 m; rare.

Remarks: *Dendronotus diversicolor* was recently (Stout et al., 2010) synonymized with this species based on a lack of genetic variation and a lack of significant morphological differences.

Dendronotus dalli Bergh, 1879. Dall's dendronotid or frond eolis.

Dendronotus elegans A. E. Verrill 1880.

Type locality: Bering Strait. Distribution: North Alaska to northern Washington; western North Atlantic; White, Barents, and Chukchi seas; Commander Islands; Okhotsk Sea; Kuril Islands; Kamchatka Peninsula; 10–360 m; common.

Dendronotus iris J. G. Cooper, 1863. Giant nudibranch or frond-aeolis.

Dendronotus giganteus O'Donoghue 1921; *Dendronotus nanus* Marcus and Marcus 1967.

Type locality: Santa Barbara, California. Distribution: North Alaska to Baja California, Mexico; subtidal zone to 215 m; common.

Dendronotus rufus O'Donoghue, 1921. Red frond-aeolis or red dendronotid.

Type locality: Vancouver Island, British Columbia. Distribution: Southern Alaska to northern Washington; subtidal zone; common.

Dendronotus venustus MacFarland, 1966. Branched dendronotid.

Dendronotus frondosus (Ascanius, 1774) (in part, Northeast Pacific populations).

Type locality: Monterey Bay, California. Distribution: Eastern Pacific, the exact range is unknown and more species from the Arctic need to be examined (Stout et al., 2010); depth unknown.

Remarks: This species was synonymized with *D. frondosus* (Ascanius, 1774), described from Norway. However, molecular data suggest *D. frondosus* should be restricted to the Atlantic (Stout et al., 2010).

Family Tethydidae

Melibe leonina (Gould, 1853). Lion nudibranch.

Chioraera leonina Gould 1852; *Melibe pellucida* Bergh 1904; *Chioraera dalli* Heath 1917; *Melibe dalli* (Heath 1917).

Type locality: Port Discovery, Puget Sound, Washington. Distribution: Northern Gulf of Alaska to Baja California, Mexico; intertidal zone to 37 m.

Superfamily unassigned

Family Dotidae

Doto amyra Marcus, 1961. Hammerhead or orange doto.

Doto ganda Marcus 1961; *Doto wara* Marcus 1961; *Doto varians* MacFarland 1966.

Type locality: California. Distribution: Southern Alaska to Baja California, Mexico; intertidal and subtidal zones.

Family Dironidae

Dirona albolineata MacFarland, 1905. Frosted or white-line dirona.

Type locality: Monterey Bay, California. Distribution: Southern Alaska to southern California; Japan; Siberia; intertidal zone to 37 m; common.

Dirona pellucida Vilodchenko, 1941. Golden dirona.

Dirona aurantia Hurst 1966.

Type locality: De Castri Bay, Sea of Japan. Distribution: Norton Sound, Alaska, to Puget Sound, Washington; Commander Islands; Okhotsk Sea; Kuril Islands; intertidal zone to 60 m; moderately common.

Family Proctonotidae

Janolus fuscus O'Donoghue, 1924.

Antiopella fusca (O'Donoghue 1924); formerly with *Antiopella barbarensis* (Cooper 1863).

Type locality: Galiano Island, Vancouver Island, British Columbia. Distribution: Southern Alaska to southern California; Sea of Japan; intertidal zone to 30 m.

Subclade Euarminida

Superfamily Arminoidea

Family Arminidae

Armina californica (J. G. Cooper, 1863). California armina or striped nudibranch.

Pleurophyllidia californica Cooper 1863; *Armina vancouverensis* (Bergh 1876); *Armina columbiana* O'Donoghue 1924; *Armina digueti* Pruvot-Fol 1955.

Type locality: San Diego Bay, California. Distribution: Northern Alaska to Panama; intertidal zone to 230 m; common.

Subclade Aeolidida

Superfamily Flabellinoidea

Family Flabellinidae

Flabellina iodinea (J. G. Cooper, 1863). Spanish shawl or purple aeolis.

Coryphella iodinea Cooper 1863; *Flabellinopsis iodinea* (Cooper 1863); *Coryphella sabulicola* Conu and Laur 1978.

Type locality: San Diego or Santa Barbara, California. Distribution: Southern Alaska to Baja California, Mexico; intertidal zone to 40 m; common.

Flabellina japonica (Volodchenko, 1937). Pearly aeolid.

Coryphella japonica Volodchenko 1937; *Flabellina salmonacea*: Behrens 1991.

Type locality: Japan. Distribution: Circumboreal; northern Alaska to southern British Columbia; Japan; Siberia; subtidal zone.

Flabellina pricei (MacFarland, 1966). Smooth-tooth or Price's aeolis.

Coryphella pricei MacFarland 1966.

Type locality: Monterey Bay, California. Distribution: Southern Alaska to southern California; subtidal zone; rare.

Flabellina subrosacea (Eschscholtz, 1831).

Coryphella subrosacea Eschscholtz 1831.

Type locality: Sitka, Alaska. Distribution: Known only from type locality; shallow water; rare.

Flabellina trilineata (O'Donoghue, 1921). Three-lined aeolis.

Coryphella trilineata O'Donoghue 1921; *Coryphella piunca* Marcus 1961; *Coryphella fisheri* MacFarland 1966.

Type locality: Nanoose Bay, Vancouver Island, British Columbia. Distribution: Southern Alaska to Baja California, Mexico; intertidal zone to 50 m.

Flabellina trophina (Bergh, 1890). Red flabellina or predaceous aeolis.

Himatella trophina Bergh 1890; *Coryphella trophina* (Bergh 1890); *Coryphella fusca* O'Donoghue 1921; *Flabellina fusca* (O'Donoghue 1921).

Type locality: Southern Alaska. Distribution: Southern Alaska to central Oregon; Sea of Japan; subtidal zone to 65 m.

Flabellina verrucosa (M. Sars, 1829). Red-finger or red-gilled aeolis.

Aeolidia verrucosa M. Sars 1829; *Coryphella verrucosa* (M. Sars 1829); *Coryphella rufibranchialis* (Johnston 1832); *Coryphella verrucosa rufibranchialis* (Johnston 1832); *Coryphella diversa* (Couthouy 1839); *Coryphella longicaudata* O'Donoghue 1922.

Type locality: Norway. Distribution: Circumboreal; southern Alaska to northern Washington; Sea of Japan; Greenland to Maine; Iceland; Norway; Britain; Barents and White seas; Kamchatka; intertidal zone to 300 m; common.

Superfamily Fionoidea

Family Eubranchidae

Eubranchus rupium Møller, 1842. Olive aeolid.

Eubranchus olivaceus (O'Donoghue 1921).

Type locality: Greenland. Distribution: Southern Alaska to Baja California, Mexico; Greenland; Denmark; Sweden; Norway; Netherlands; shallow water.

Eubranchus rustyus (Marcus, 1961). Rusty aeolis.

Capellinia rustya Marcus 1961; *Eubranchus occidentalis* MacFarland 1966.

Type locality: California. Distribution: Southern Alaska to Baja California; intertidal and subtidal zones; uncommon.

Eubranchus sanjuanensis Roller, 1972.

Type locality: San Juan Island. Distribution: Southern Alaska to San Juan Islands, Washington; shallow water.

Family Tergipedidae

Catriona columbiana (O'Donoghue, 1922). Red-tentacle cuthona or British Columbia's aeolid.

Amphorina columbiana O'Donoghue 1922; *Galvina columbiana* (O'Donoghue 1922); *Cratena columbiana* (O'Donoghue 1922); *Catriona columbiana* (O'Donoghue 1922); *Cuthona alpha* Baba and Hamatani 1963; *Cratena spadix* MacFarland 1966.

Type locality: Gabriola Pass, Gabriola Island, Vancouver Island, British Columbia. Distribution: Southern Alaska to southern California; Japan; New Zealand; South Africa; South Kuril Islands; intertidal and subtidal zones.

Cuthona albocrusta (MacFarland, 1966). White-crust cuthona.

Cratena albocrusta MacFarland 1966; *Trinchesia albocrusta* (MacFarland 1966).

Type locality: Pacific Grove, California. Distribution: Prince William Sound, Alaska, to Baja California, Mexico; shallow water.

Cuthona concinna (Alder and Hancock, 1843). Concise cuthona.

Eolis concinna Alder and Hancock 1843; *Cratena concinna* (Alder and Hancock 1843); *Trinchesia concinna* (Alder and Hancock 1843); *Cuthonella concinna* (Alder and Hancock 1843).

Type locality: Whitley, Northumberland. Distribution: Circumpolar, including northern Alaska to southern British Columbia; Barents Sea; White Sea; subtidal zone.

Cuthona pustulata (Alder and Hancock, 1854).

Eolis pustulata Alder and Hancock 1854; *Cratena pustulata* (Alder and Hancock 1854); *Trinchesia pustulata* (Alder and Hancock 1854).

Type locality: Cullercoats, England. Distribution: Central Alaska to southern British Columbia; France; British Isles; Denmark; Iceland; Nova Scotia; Maine; subtidal zone.

Cuthona viridis (Forbes, 1840). Green aeolid.

Type locality: Britain. Distribution: Southern Alaska to northern Washington; western Russia; amphi-North Atlantic; intertidal and subtidal zones.

Family Fionidae

Fiona pinnata (Eschscholtz, 1831). Feathered or Atlantic blue fiona.

Eolidia pinnata Eschscholtz 1831; *Eolidia natans* d'Orbigny 1837; *Oithona nobilis* Alder and Hancock 1851.

Type locality: Sitka, Alaska. Distribution: Cosmopolitan in northern seas; Chile; pelagic.

Superfamily Aeolidioidea

Family Facelinidae

Hermissenda crassicornis (Eschscholtz, 1831). Large-horned hermissenda or opalescent nudibranch.

Cavolina crassicornis Eschscholtz 1831; *Phidiana crassicornis* (Eschscholtz 1831); *Flabellina opalescens* Cooper 1863; *Hermissenda crassicornis* (Cooper).

Type locality: Sitka, Alaska. Distribution: Central Alaska to Baja California, Mexico; Sea of Japan; South Kuril Islands; intertidal zone to 37 m.

Family Aeolidiidae

Aeolidia herculea Bergh, 1894.

Aeolidia grandis Volodchenko 1941; *Aeolidia farallonensis* Gosliner and Behrens 1996.

Type locality: St. Barbara Island, California. Distribution: Alaska to California; Okhotsk Sea; Kamchatka; 418–1491 m.

Remarks: This species was once regarded as a junior synonym of *A. papillosa* (Linnaeus 1761).

Aeolidia papillosa (Linnaeus, 1761). Shag-rug or papillose aeolis.

Limax papillosus Linnaeus 1761; *Aeolidia farinacea* (Stimpson 1854); *Eolis campbelli* Cunningham 1871; *Aeolidea serotina* Bergh 1873; *Aeolidia papillosa* var. *pacifica* Bergh 1879.

Type locality: Norwegian Sea. Distribution: Circumboreal; Arctic Alaska to Washington; Arctic Atlantic to Maryland; Sweden; Barents, White, and Bering seas; Commander Islands; Middle and South Kuril Islands; Okhotsk Sea; intertidal zone to 900 m.

Informal Groups Pulmonata and Basommatophora

Superfamily Siphonarioidea

Family Siphonariidae

Siphonaria thersites Carpenter, 1864. Pacific falselimpet or Carpenter's false limpet.

Liriola thersites (Carpenter 1864).

Type locality: Neah Bay, Washington. Distribution: North Alaska to northern Oregon; throughout the Aleutian Islands; Commander Islands; intertidal zone; common.

Clade Systellommatophora

Superfamily Onchidioidea

Family Onchidiidae

Onchidella borealis Dall, 1871. Western North onchidella or leather limpet.

Arctonchis borealis (Dall 1871).

Type locality: Sitka, Alaska. Distribution: North Alaska to central California; intertidal zone; common.

Class Bivalvia—The Clams, Cockles, Rock Jingles, and Scallops

About 8000 marine bivalve species are known worldwide (Huber, 2010), with approximately 207 species occurring in Alaskan waters (Table 1). The most recent compilation of the bivalves is that of Coan et al. (2000) from which much of this checklist is derived. Original descriptions or other secondary literature sources (e.g., Oldroyd, 1927) were consulted for type localities.

Several bivalve species previously recorded from Alaska are not included here because of their uncertain identification. According to Clark[2], *Nuculana taphria* is distributed from the Gulf of Alaska to Mexico, but Coan et al. (2000) listed the northernmost record off Fort Bragg, California. The record in Alaska might actually be a misidentified *N. penderi* (Clark[4]). According to Clark[2], *Cyclopecten* cf. *benthalis* is known from the Gulf of Alaska, but Coan et al. (2000) listed the northernmost record as California. Clark[4] used Coan et al. (2000) to identify a specimen of *C. benthalis* that was collected off Coronation Island in Southeast Alaska. Clark (2006) also listed *Cyclocardia* cf *borealis* as occurring circumboreally, south to the Aleutian Islands, but Coan et al. (2000) do not list it at all. The specimens from Southeast Alaska identified as *C. borealis* is probably *C. gouldi* (Clark[4]).

Subclass Protobranchia

Superfamily Solemyoidea

Family Solemyidae

Acharax johnsoni (Dall, 1891). Giant awning clam.

Solemya johnsoni Dall 1891; *S. agassizii* Dall 1908; *S. tokunagai* Yokoyama 1925; *S.(Acharax) tibia* Kuroda 1948.

Type locality: Baja California, Mexico. Distribution: Southeast Alaska (Sitka) to Peru; 400–4100 m; common.

Superfamily Nuculoidea

Family Nuculidae

Acila (Truncacila) castrensis (Hinds, 1843). Divaricate nutclam.

Nucula castrensis Hinds 1843; *N. divaricata* Conrad 1848; *N. lyallii* Baird 1863; *Acila empirensis* Howe 1922, *A. (Truncacila) beringiana* Slodkevisch 1967.

Type locality: Sitka, Alaska. Distribution: Northeastern Bering Sea to Mexico; 5–400 m.

Ennucula tenuis (Montagu, 1808). Smooth nutclam.

Arca tenuis Montagu 1808; *Nucula inflata* Hancock 1846; *N. expansa* Reeve 1855; *N. bellotii* Adams 1856; *N. tenuis typica* Sars 1878; *N. t. lucida* Whiteaves 1887; *N. subovata* Verrill and Bush 1898; *N. quirica* Dall 1916; *N.(Ennucula) microsperma* Berry 1947; *N. (E.) balboana* Hertlein and Grant 1972; *Leionucula ovatotruncata* Scarlato 1981; *Nucula (Leionucula) leptodonta* Bernard 1983.

Type locality: Near Dunbar, about 30 mi east of Edinburgh, Scotland, south side of the Firth of Forth. Distribution: Circumboreal and Arctic Ocean, throughout the Bering Sea and the Gulf of Alaska, to San Diego, California, south to the Mediterranean, Florida, and northern Japan; 10–900 m; common.

Nucula (Nucula) zophos Clarke, 1960.

Type locality: Beaufort Sea. Distribution: Known only from type locality; 2377 m; rare.

Superfamily Pristiglomoidea

Family Pristiglomidae

Setigloma japonica (E.A. Smith, 1885). Japan gloma.

Glomus japonicus E. A. Smith 1885.

Type locality: Japan. Distribution: Gulf of Alaska off Unimak Island and off Cape Yakataga, Alaska, south to Tufts Abyssal Plain, Oregon, and from the Kuril Islands to southeastern Japan; 3000–5240 m.

Superfamily Nuculanoidea

Family Nuculanidae

Nuculana (Jupiteria) cellulita (Dall, 1896). Fine-lined nutclam.

Leda cellulita Dall 1896; *Nuculana burchi* Willett 1944.

Type locality: Puget Sound, near Port Orchard. Distribution: Edna Bay, Kosciusko Island, Alaska, to Tillamook, Oregon; 30–146 m.

Nuculana (Jupiteria) penderi (Dall and Bartsch, 1910). Sharp-point nutclam.

Leda penderi Dall and Bartsch 1910; *L. oxia* Dall 1916; *Nuculana redondoensis* Burch 1944; *N. acuta* Conrad 1832.

Type locality: Barkley Sound, Vancouver Island, British Columbia. Distribution: Sitka, Alaska, to Mazatlán, Sinaloa, Mexico; 20–500 m.

Nuculana (Nuculana) extenuata (Dall, 1897). Elongate nutclam.

Leda extenuata Dall 1897; *L. (Leda) loshka* Dall 1908.

Type locality: Dixon Entrance, British Columbia. Distribution: Sitka, Alaska, to Panama; 2000–2900 m.

Nuculana (Nuculana) hamata (Carpenter, 1864). Hooked nutclam.

Leda hamata Carpenter 1864; *L. h. limata* Dall 1916.

Type locality: Catalina Island, California. Distribution: Forrester Island, Alaska, to Isla Cedros, Baja California into the Gulf of California, and possibly as far south as Panama; 30–550 m.

Nuculana (Nuculana) leonina (Dall, 1896). Lion nutclam.

Leda leonina Dall 1896; *L. amiata* Dall 1916; *L. liogona* Dall 1916.

Type locality: Sea Lion Rock, Washington. Distribution: Southeast Bering Sea, Alaska, to San Diego, California, and to Kamchatka in the western Pacific; 350–2500 m.

Nuculana (Nuculana) minuta (Müller, 1776). Minute nutclam.

Arca minuta Müller 1776; *Leda m. tumida* Möller 1842; *L. complanata* Möller 1842; *Nuculana minuta grandis* Mörch 1857; *L. m. brevirostris* Jeffreys 1864; *L. m. praecursor* Arnold 1903; *L. lomaensis* Dall 1919; *L. minuta plana* Filatova 1948; *N. (N.) ochotensis* Scarlato 1981; *N. (N.) minuta angusticauda* Scarlato 1981; *N. m. magna* Petrov 1982.

Type locality: Greenland. Distribution: Panarctic and circumboreal, from the Beaufort Sea at Point Barrow, through Bering Strait and the Bering Sea, the Gulf of Alaska, south to Santa Catalina Island, California; south to Scotland in the eastern Atlantic; to Maine in the western Atlantic; and to Kamchatka and northern Japan in the western Pacific; 4–1900 m.

Nuculana (Nuculana) navisa (Dall, 1916). Ship nutclam.

Leda navisa Dall 1916; *L. spargana* Dall 1916; *L. austini* Oldroyd 1935.

Type locality: Farallon Islands, California. Distribution: Albatross Bank, Kodiak Island and Montague Island, Prince William Sound, Alaska, to Point Loma, California; 46–420 m.

Nuculana (Nuculana) pernula (Müller, 1779). Northern nutclam.

Arca pernula Müller 1779; *A. rostrata* Bruguière 1789; *Nucula oblonga* Brown 1827; *N. jacksonii* Gould 1841; *Leda buccata* Möller 1842; *L. b. brevis* Möller 1842; *L. b. laevior* Möller 1842; *L. macilenta* Möller 1842; *L. fossa* Baird 1863; "*L. foveata* Baird," Carpenter 1865; *L. pernula falcula* Jeffreys 1877; *L. pernuloides* Dunker 1882; *L. pernula costigera* Leche 1883; *L. p. lamellosa* Leche 1883; *L. p. radiata* Krause 1885; *L. amblia* Dall 1905; *L. fossa sculpta* Dall 1916; *L. f. vaginata* Dall 1916; *L. f. curtulosa* Dall 1916; *L. sadoensis* Yokoyama 1926; *L. pernula elongata* Deriugin 1928; *L. p. arctica* Mesiatsev 1931; *L. p. borealis* Mesiatsev 1931; *L. p. marisalbae* Mesiatsev 1931.

Type locality: North Sea. Distribution: Panarctic and circumboreal, from the Beaufort Sea through Bering Strait from the Bering Sea south to Monterey Bay, California; south to Cape Cod in Western Atlantic; to Norway in the eastern Atlantic; and to northern Japan in the western Pacific; 20–1400 m.

Nuculana (Tenuileda) conceptionis (Dall, 1896). California nutclam.

Leda conceptionis Dall 1896; *L. gomphoidea* Dall 1916.

Type locality: Point Conception, California. Distribution: Pribilof Islands, Bering Sea, Alaska, to San Clemente Island, California; 300–2300 m.

Ledella (Ledella) sandersi Filatova and Schileyko, 1984. Sanders miniature-nutclam.

Type locality: Southeast Alaska (Gulf of Alaska). Distribution: Known only from type locality; 3240–3300 m.

Ledella (Ledella) tamara Gorbunov, 1946. Arctic miniature-nutclam.

Type locality: Siberian Arctic. Distribution: Arctic Ocean from Chukchi Rise, Beaufort Sea, west to Novosibirskiye Island; 2130–3800 m.

Ledellina convexirostrata Filatova and Schileyko, 1984. Spinula miniature-nutclam.

Ledella spinuliformis Bernard 1989.

Type locality: Not specified. Distribution: South of the Alaska Peninsula to Tillamook, Oregon and east of Japan in deep water; 2800–6608 m.

Ledellina formabile Filatova and Schileyko, 1984. Pointed miniature-nutclam.

Type locality: Not specified. Distribution: Gulf of Alaska and western Pacific off Kamchatka; 3680–3940 m.

Family Malletiidae

Katadesmia vincula (Dall, 1908).Tied malletia.

Yoldia (Katadesmia) vincula Dall 1908; *Malletia fiora* Dall 1916.

Type locality: Gulf of Panama. Distribution: Sitka, Alaska to the Gulf of Panama; 590–3585 m.

Malletia pacifica Dall, 1897. Pacific malletia.

Type locality: Clarence Strait, Alaska. Distribution: Knight Island Passage, Prince William Sound, Alaska, south to Point Loma, California; 400–2900 m.

Malletia talama Dall, 1916. Fat malletia.

Malletia (Minormalletia) talama Dall 1916.

Type locality: Pribilof Islands, Bering Sea. Distribution: Bering Sea south of the Pribilof Islands, Alaska, to the Farallon Islands, California; 2900–3240 m.

Family Neilonellidae

Neilonella brunnea (Dall, 1916). Brown neilonellid.

Tindara brunnea Dall 1916.

Type locality: Bering Sea. Distribution: Near the Pribilof Islands, Bering Sea, to Cascadia Plain, Oregon; 2500–3700 m.

Family Yoldiidae

Yoldia (Yoldia) hyperborea (Gould, 1841). Northern yoldia.

Nucula hyperborea Gould 1841; *N. amygdalea* Valenciennes 1846; *Yoldia hyperborea* Torell 1859; *Y. norvegica* Dautzenberg and P. M. H. Fischer 1912; *Y. gardneri* Oldroyd 1935; *Y. hyperborea limatuloides* Ockelmann 1954; ?*Y.(Yoldiella) keenae* F. J. E. Wagner 1959; ?*Y. bartschi* Scarlato 1981.

Type locality: Massachusetts. Distribution: Circum-Arctic; Beaufort Sea, Alaska to San Diego,California; western Pacific in the Siberian Arctic, Kamchatka

Peninsula and the Sea of Okhotsk to south Sakhalin Islands and northern Japan; in North Atlantic south to Norway, Iceland and Greenland; 15–360 m.

Yoldia (Yoldia) myalis (Couthouy, 1838). Oval yoldia.

Nucula myalis Couthouy 1838; *N. cascoensis* Mighels and C. B. Adams 1842; *Yoldia vancouverensis* E. A. Smith 1880; *Nucula limatula* Say 1831.

Type locality: Massachusetts Bay. Distribution: Circum-Arctic; Beaufort Sea, Alaska, to San Juan Island, Washington; western North Atlantic from Hudson Bay to Maine; also in Sea of Okhotsk; 20–165 m.

Yoldia (Cnesterium) seminuda Dall, 1871. Oblique-lined yoldia.

Nucula arctica Broderip and Sowerby I 1829; *Yoldia seminuda* Dall 1871; *Y. scissurata* Dall 1897; *Y. ensifera* Dall 1897; *Y. keppeliana* G. B. Sowerby III 1904; *Y. ensifera plena* Dall 1908; *Y. (Cnesterium) strigata* Dall 1909; *Y. (Cnesterium) johanni* Dall 1925; *Y. imleri* Waterfall 1929; ?*Y. kuluntunensis* Slodkevich 1936; ?*Y. kuluntunensis sakhalinensis* Slodkevich 1936.

Type locality: St. Paul's Harbor, Kodiak, Alaska. Distribution: Arctic and western North Pacific; Beaufort Sea, Alaska, throughout the Bering Sea to San Diego, California; Sea of Okhotsk and northern Japan;15–375 m; common.

Megayoldia montereyensis (Dall, 1893). Monterey yoldia.

Yoldia montereyensis Dall 1893; *Y. beringiana* Dall 1916; *Megayoldia kamchatkana* Scarlato 1981.

Type locality: Monterey Bay, California. Distribution: Pribilof Islands, Bering Sea, to Monterey, California, and west to Kamchatka; 200–400 m.

Megayoldia thraciaeformis (Storer, 1838). Broad yoldia.

Nucula thraciaeformis Storer 1838; *N. navicularis* Couthouy 1839; *Yoldia angularis* Möller 1842; *Y. regularis* Verrill 1884; *Portlandia dalli* Krause 1885; *Nucula groenlandica* Posselt 1898; *Yoldia secunda* Dall 1916; *Y. scapha* Yokoyama 1926; *Microyoldia ochotensis* Scarlato 1981.

Type locality: Point Race, Atlantic. Distribution: Low Arctic Ocean and circumboreal; northern Bering Sea south to San Francisco Bay, California; in western Pacific south to Sagami, Japan; 25–760 m; common.

Portlandia aestuariorum (Mosevich, 1928). Estuary yoldia.

Yoldia arctica aestuariorum Mosevich 1928.

Type locality: Not traced. Distribution: Arctic Ocean from the Kara Sea to western Siberia; Beaufort Sea, off Pingok Island; 10–100 m.

Portlandia arctica (J. E. Gray, 1824). Arctic yoldia.

Nucula arctica Gray 1824; *N. glacialis* Wood 1828; *Yoldia arctica* Möller 1842; *Nucula siliqua* Reeve 1855; *N. portlandica* Reeve 1855; *Yoldia arctica inflata* Leche 1883; *Y. a. nux* Brøgger 1900; *Leda (Portlandia) collinsoni* Dall 1919; *Y. a. ovata* Mosevich 1928; *Portlandia arctica typica* Filatova 1951.

Type locality: Arctic Ocean. Distribution: Circum-Arctic; Beaufort Sea to Bering Strait, Alaska south to the Pribilof Islands and to Greenland, Hudson Strait, and the Siberian Sea; 10–500 m.

Portlandia intermedia (M. Sars, 1865). Intermediate yoldia.

Yoldia intermedia Sars 1859; *Yoldiella intermedia major* Leche 1878; *Yoldia oleacina* Dall 1916.

Type locality: Vadso, Norway. Distribution: Circum-Arctic; Beaufort Sea and Chukchi Sea south into the Bering Sea; Greenland, Iceland, and northern Norway; 50–450 m.

Portlandia lenticula (Möller, 1842). Lenticulate yoldia.

Nucula lenticula Möller 1842; *Yoldia abyssicola* Torell 1859; *Yoldiella lenticula amblia* Verrill and Bush 1898.

Type locality: Greenland. Distribution: Circum-Arctic; Beaufort Sea south into the northern Bering Sea; Greenland, Iceland, northern Norway, and Cape Cod; 50–350 m.

Yoldiella derjugini Scarlato, 1981. Derjugin yoldia.

Yoldiella derjugini Ushakov 1953; *Y. derjugini* Scarlato 1981; *Y. gorbunovi* Scarlato and Kafanov 1988.

Type locality: Western North Pacific. Distribution: Kamchatka to the Kuril Islands and Japan; Gulf of Alaska; 520–800 m.

Yoldiella frigida (Torell, 1859). Frigid yoldia.

Yoldia frigida Torell 1859.

Type locality: Spitsbergen. Distribution: Circum-Arctic and circumpolar; Beaufort Sea, Greenland, Iceland, and perhaps New England; 110–500 m.

Yoldiella nana (M. Sars, 1865). Sibling yoldia.

Yoldia nana Sars 1865; *Yoldiella fraterna* Verrill and Bush 1898.

Type locality: Not traced. Distribution: Circum-Arctic and circumpolar; Beaufort Sea, into the Bering Sea, to Herendeen Bay, north side of Alaska Peninsula, Alaska, and south to the Farallon Islands, California; North Atlantic and Hudson Bay, south to the western Mediterranean; 40–991 m.

Yoldiella orcia (Dall, 1916). California yoldia.

Yoldia orcia Dall 1916; *Y. sanesia* Dall 1916.

Type locality: San Diego, California. Distribution: Boca de Quadra, Alaska, to San Diego, California; 48–1500 m.

Subclass Pteriomorpha

Superfamily Arcoidea

Family Arcidae

Bathyarca frielei (Friele, 1877). Boreal bathyark.

Arca frielei Friele 1877; *A. pectunculoides crenulata* Verill 1882.

Type locality: Norway. Distribution: Throughout the Arctic and Tufts Abyssal Plain, 5180 m; Beaufort Sea; 55 m.

Bathyárca glacialis (Gray, 1824). Arctic bathyark.

Arca glacialis Gray 1824.

Type locality: Not traced. Distribution: Through the Arctic, including the Beaufort Sea, Alaska, south to the Gulf of St. Lawrence in the western Atlantic and to northern Norway in the eastern Atlantic; 23–455 m.

Samacar sp. A *sensu* Coan et al., 2000.

Distribution: Aleutian Islands, from Kiska Island to Atka Island; 70–168 m.

Superfamily Glycymeridoidea

Family Glycymerididae

Glycymeris (Axinola) keenae Willett, 1944. Commarginal bittersweet.

Glycymeris keenae Willett 1944.

Type locality: Forrester Island, southeastern Alaska. Distribution: Known only from type locality; 55 m.

Glycymeris (Axinola) septentrionalis (Middendorff, 1849). Western bittersweet.

Pectunculus septentrionalis Middendorff 1849; *P. kaschewarowi* Grewingk 1850; *Axinaea (?septentrionalis) subobsoleta* Carpenter 1864; *Glycymeris profunda* Dall 1878; *G. grewingki* Dall 1909; *G. conradi* Dall 1909; *G. gabbi* Dall 1909; *G. coalingensis* Arnold 1910; *G. corteziana* Dall 1916; *G. migueliana* Dall 1916; *G. larvata* Hanna 1924; *G. guadalupensis* Strong 1938.

Type locality: Arctic Ocean. Distribution: Chirikof Island and Cook Inlet, Alaska, to Rocas Alijos, Baja California Sur, and off Isla Smith in the Gulf of California; intertidal zone to 400 m.

Superfamily Limopsoidea

Family Limopsidae

Empleconia vaginata (Dall, 1891). Vaginate limops.

Limopsis vaginata Dall 1891; *L. skenia* Dall 1916.

Type locality: Unalaska Island, Bering Sea. Distribution: Pribilof Islands and Bowers Bank, Bering Sea, west to Unalaska Island, east to Afognak Island, Alaska, and west to Kamchatka and the western Bering Sea; 160–650 mm.

Limopsis akutanica Dall, 1916. Akutan limops.

Type locality: Southeast of Akutan Island, Aleutian Islands. Distribution: Adak Island, Aleutian Islands east to Bristol Bay, Alaska; 55–275 m.

Limopsis tenella Jeffreys, 1876. Ocean limops.

Limopsis pelagica E. A. Smith 1885; *L. plana* Verrill 1885; *L. compressa* Dall 1896; *L. profundicola* Verrill and Bush 1898; *L. transversa* Locard 1898; *L. dalli* Lamy 1912; *L. guineensis* Thiele, in Thiele and Jaeckel 1931.

Type locality: Davis Strait. Distribution: Eastern Pacific from Adak Island, Alaska, south to the Gulf of Panama and the Galapagos Islands; Japan; North Atlantic and Indian oceans; 550–5180 m.

Nipponolimopsis decussata (A. Adams, 1862). Cancellate limops.

Cyrilla decussata A. Adams 1862; *Limopsis nipponica* Yokoyama 1922; *L. skinoshitai* Kuroda 1929; *L. hilgendorfi* Thiele, in Thiele and Jaeckel 1931.

Type locality: Japan. Distribution: Semisopochnoi Island and Amatignak Island, western Aleutian Islands; Sagami Bay, Honshu Island, to Kyushu Island, Japan; 219–388 m.

Superfamily Philobryoidea

Family Philobryidae

Philobrya setosa (Carpenter, 1864). Hairy philobrya.

Bryophila setosa Carpenter 1864.

Type locality: Cape San Lucas, Baja California. Distribution: Montague Island, Alaska, south to Punta Santa Elena, Costa Rica; intertidal zone to 40 m.

Superfamily Mytiloidea

Family Mytilidae

Adula schmidtii (Schrenck, 1867). Schmidt datemussel.

Modiola (Lithophagus) schmidtii Schrenck 1867; *Adula nipponica* Habe 1955; *A. californiensis chosenica* Habe and Ito 1965.

Type locality: Japan. Distribution: Amchitka Island and Umnak Island in the Aleutian Islands, Alaska; found in intertidal drift; 15–20 m.

Crenella decussata (Montagu, 1808). Cross-sculpture crenella.

Mytilus decussates Montagu 1808; *Crenella elliptica* T. Brown 1827; *Nuculocardia divaricata* d'Orbigny 1842; *Modiola? cicercula* Möller 1842; *Crenella? inflata* Carpenter 1864; *C. divaricata* Yokoyama 1922; *C. yokoyamai* Nomura 1932; *C. ecuadoriana* Pilsbry and Olsson 1941; *C. decussata laticostata* Scarlato 1960.

Type locality: Scotland. Distribution: Arctic and circumboreal; Beaufort Sea, Alaska, south through the Gulf of California to northern Peru and the Galapagos Islands; in the Atlantic from North Carolina to the Caribbean and south to the British Isles; south to Japan in the western North Pacific; intertidal zone to 200 m.

Dacrydium (Dacrydium) pacificum Dall, 1916. Pacific glassy-mussel.

Dacrydium pacificum Dall 1916.

Type locality: Bering Sea. Distribution: Pribilof Islands, Bering Sea, Alaska, to Rocas Alijos, Baja California Sur; 90–2570 m.

Dacrydium (Dacrydium) vitreum (Möller, 1842). Arctic glassy-mussel.

Modiola? vitrea Möller 1842; ?*Dacrydium minimum* Okutani and Isumidate 1992.

Type locality: Greenland. Distribution: Circum-Arctic and high circumboreal; Beaufort Sea, to Boca de Quadra, southeastern Alaska; in the Atlantic from Greenland to Sweden; in the western Pacific from the Sea of Okhotsk and Gulf of Anadyr; 30–150 m.

Modiolus (Modiolus) modiolus (Linnaeus, 1758). Northern horsemussel.

Mytilus modiolus Linnaeus 1758; *Modiola papuana* Lamarck 1801; *M. gibbsii* Leach 1815; *M. vulgaris* J. Fleming 1828; *M. grandis* R. A. Philippi 1844; *Mytilus modiolus ovata* Jeffreys 1864; *Volsella difficilis* Kuroda and Habe 1950; *Modiolus kurilensis* F. R. Bernard 1983.

Type locality: Mediterranean Sea. Distribution: Circumboreal; St. Paul Island, Pribilof Islands, Bering Sea, throughout the Aleutian Islands, south to Monterey, California; south to Honshu Island, Japan; from Greenland to New Jersey; along the European coast to the Mediterranean; intertidal zone to 200 m; abundant.

Remarks: There is genetic evidence that the Pacific populations might represent a cryptic species (Halanych et al., 2013).

Musculus discors (Linnaeus, 1767). Discordant mussel.

Mytilus discors Linnaeus 1767; *M. discrepans* Montagu 1803; *Modiola laevigata* J. E. Gray 1824; *M. substriata* J. E. Gray 1824; *Modiolaria laevis* Robert 1838; *Modiolaria faba* Robert 1838; *M. discors angustior* Jeffreys 1864; *M. d. semilaevis* Jeffreys 1864; *M. impressa* Dall 1907; *Musculus olivaceus* Dall 1916; *M. incurvatus* Scarlato 1960.

Type locality: Norway and Iceland. Distribution: Circum-Arctic and circumboreal; Beaufort Sea, east to Cook Inlet, Alaska, south to Aberdeen, Washington; south to northern Japan; North Atlantic from Greenland to Long Island and west to the Mediterranean; 5–150 m; common.

Musculus glacialis (Leche, 1883). Corrugate mussel.

Mytilus corrugatus Stimpson 1851; *Modiolaria corrugata glacialis* Leche 1883.

Type locality: Circum-Arctic; Beaufort Sea and Chukchi Sea, south to Cape Flattery, Washington; western North Pacific to the Sea of Japan; western North Atlantic to Massachusetts; 25–274 m.

Musculus niger (J. E. Gray, 1824). Black mussel.

Modiola nigra J. E. Gray 1824; *Modiolaria striatula* Robert 1838, *ex* Beck MS; *Modiola cultellus* Deshayes 1839; *Modiola nexa* A. A. Gould 1841; *Modiolus stalderi* B. Martin 1914; *Musculus niger obesus* Dall 1916, *nomen nudum*; *Musculus protractus* Dall 1916, *nomen nudum*; *Musculus nigra protractus* Dall 1916; *Modiolaria nigra bullata* Deriugin 1928.

Type locality: Not traced. Distribution: Panarctic and circumboreal; Beaufort Sea, west to Amchitka Island, Aleutian Islands; Gulf of Alaska south to Willapa Bay, Washington; in the western Pacific south to the East China Sea; in the North Atlantic, from Hudson Bay, Quebec, to Delaware, and south to France; intertidal zone to 150 m.

Musculus phenax (Dall, 1915). Alaska dwarf-mussel.

Modiolaria phenax Dall 1915; *Musculus phenax* (Dall 1915).

Type locality: St. George Island, Pribilof Islands, Bering Sea. Distribution: Pribilof Islands, Bering Sea, and from Amaknak Island, Aleutian Islands, to Kodiak Island, Alaska; western Pacific at Commander Islands, Kamchatka; intertidal zone.

Remarks: The size, sculpture, and larval development suggests that a new genus is needed for this species (Coan et al., 2000).

Mytilus californianus Conrad, 1837. California mussel.

Mytilus edulis giganteus von Nordmann 1862.

Type locality: San Diego, California. Distribution: Eastern North Pacific from Cook Inlet, Alaska, to Punta Rompiente, Baja California, with an isolated population on Isla Socorro, Islas Revillagigedo, Mexico; intertidal zone to 50 m; common.

Mytilus trossulus Gould, 1850. Foolish mussel.

Mytilus glomeratus Gould 1851; *M. pedroanus* Conrad 1855; *M. edulis normalis* Carpenter 1857; *M. e. latissimus* Carpenter 1857; *M. septentrionalis* Clessin 1887; *M. ficus* Dall 1909; *M. (Mytilus) edulis kussakini* Scarlato and Starobogatov 1979; *M. edulis declivis* Petrov 1982.

Type locality: Not traced. Distribution: Arctic Ocean from Banks Island, Northwest Territories, west to Point Barrow, Alaska, throughout the Bering Sea, south to central California, and probably sporadically to southern California, where it is displaced by *M. galloprovincialia* (from central California southward, it forms hybrids with *M. galloprovincialia);* westward throughout the Aleutian Islands to Siberia, and probably to northern Japan; disjunct populations in northeastern Canada and the Baltic Sea; intertidal zone.

Solamen columbianum (Dall, 1897). British Columbia crenella.

Crenella columbiana Dall 1897; *C. leana* Dall 1897; *C. megas* Dall 1902; *C. rotundata* Dall 1916; *C. tamurai* Habe 1955.

Type locality: Port Orchard, Puget Sound, Washington. Distribution: Kiska Island, Aleutian Islands, west to Cook Inlet, Alaska, south to Point Loma, California, and west to Siberia and northern Japan; 20–500 m.

Solamen leanum (Dall, 1897). Lea crenella.

Crenella leana Dall 1897.

Type locality: Near Middleton Island, Alaska. Distribution: Kiska Island and Atka Island, Aleutian Islands, west to the Shumagin Islands and Middleton Island, Alaska, and from the Kuril Islands to the Sea of Japan; 18–22 m.

Vilasina seminuda (Dall, 1897). Partly-sculptured crenella.

Modiolaria seminuda Dall 1897; *Crenella seminuda* (Dall 1897); *Crenella grisea* Dall 1907; *C. rotundata* Dall 1916; ?*Vilasina pseudopillula* M. B. Ivanova, in Scarlato 1981.

Type locality: Markoffski Bay, Unalaska, Aleutian Islands. Distribution: Bristol Bay to Unalaska Island, Alaska, through the Gulf of Alaska, and south to Cape Flattery, Washington; western Pacific in the Kuril and Commander islands; 10–300 m.

Vilasina vernicosa (Middendorff, 1849). Varnished crenella.

Modiolaria vernicosa Middendorff 1849; *Vilasina pseudovernicosa* M. B. Ivanova, in Scarlato 1981.

Type locality: Sea of Okhotsk. Distribution: Pribilof Islands, Bering Sea, in the Aleutian Islands and the Gulf of Alaska and south to Forrester Island, Alaska, west to the Sea of Okhotsk and Kuril Islands; 10–80 m; uncommon.

Superfamily Limoidea

Family Limidae

Limatula (Limatula) attenuata Dall, 1916. Attenuate fileclam.

Limatula attenuata Dall 1916; *Pecten subauriculatus* Montagu, *auctt.*, non Montagu 1808.

Type locality: Nazan Bay, Atka Island, Aleutian Islands. Distribution: Pribilof Islands and Bristol Bay, south to Cape Flattery, Washington, and west to Atka Island, Aleutians, and Kamchatka; 15–274 m.

Limatula (Limatula) hyperborea Jensen, 1905. Arctic fileclam.

Limatula hyperborea Jensen 1905.

Type locality: Greenland. Distribution: Arctic Ocean; Beaufort Sea, North Atlantic, Greenland, Spitsbergen, Kara Sea, Arctic Siberia; 79–455 m.

Limatula (Limatula) saturna F. R. Bernard, 1978. Saturna fileclam.

Limatula californica F. R. Bernard 1988; *L. macleani* F. R. Bernard 1988; *Pecten subauriculatus* Montagu, *auctt.*, non Montagu 1808.

Type locality: Saturna Island, Strait of Georgia, British Columbia, 48°48.2′N, 123°13.2′W. Distribution: Albatross Bank, Kodiak Island, Alaska, to Cabo San Lucas, Baja California Sur; 30–675 m.

Limatula (Limatuletta) japonica A. Adams, 1864. Japan fileclam.

Limatula japonica A. Adams 1864.

Type locality: Japan. Distribution: Carlisle Island, Aleutian Islands; Japan; Australia, New Zealand, 20–500 m, rare.

Remarks: A single specimen that may represent this species has been obtained from the Aleutian Islands near Carlisle Island, Alaska at 121 m (Coan et al., 2000). This species was previously known from south of Hokkaido, Japan, to Australia and New Zealand, from 20–500 m.

Superfamily Ostreoidea

Family Ostreidae

Ostrea lurida Carpenter, 1864. Olympia oyster.

Ostrea lurida expansa Carpenter 1864; *Ostrea lurida laticaudata* Carpenter 1864; *Ostrea lurida rufoides* Carpenter 1864; *Monoeciostrea vancouverensis* Orton 1928, *nomen vanum.*

Type locality: Willapa Bay, Washington. Distribution: Sitka, Alaska, to Baja California, Mexico; intertidal zone to 10 m.

Remarks: This species was synonymized with *Ostrea conchaphila* Carpenter 1857, but molecular data has shown that *O. lurida* should be reinstated even though there are no clear morphological differences (Polson et al., 2009).

Superfamily Pectinoidea

Family Pectinidae

Chlamys albida (R. Arnold, 1906). White scallop.

Pecten (Chlamys) hastatus albidus R. Arnold 1906; *P. (Chlamys) erythrocomatus* Dall 1907; *Chlamys hanaishiensis* Masuda 1962; *C. (Chlamys) wainwrightensis* MacNeil 1967.

Type locality: Unalaska, Aleutian Islands. Distribution: Wainwright, Arctic Alaska, south to the Aleutian Islands from Tigalda to Atka; Kamchatka and the Kuril Islands to northern Japan; 100–200 m.

Chlamys behringiana (Middendorff, 1849). Bering scallop.

Pecten islandicus behringiana Middendorff 1849; *P. hericeus strategus* Dall 1898; ?*P. (Chlamys) lioicus* Dall 1907; *Chlamys (Chlamys) beringiana graui* MacNeil 1967; *C. (Chlamys)* *beringiana unalaskae* MacNeil 1967; *C. (Chlamys) pseudislandica* MacNeil 1967; *C. (Chlamys) pseudislandica plafkeri* MacNeil 1967; *C. (Chlamys) pseudislandica arconis* MacNeil 1967; *C. (Chlamys) islandica thulensis* MacNeil 1967; *C. islandica* (Gmelin), *auctt.*, non Gmelin 1791.

Type locality: Bering Sea. Distribution: Beaufort Sea to Point Barrow, Alaska, through the Chukchi Sea, south in the Bering Sea to Bristol Bay and west to Unalaska Island, Aleutian Islands; Kamchatka; Hokkaido, Japan; 25–150 m.

Chlamys hastata (G. B. Sowerby II, 1842). Spiny scallop.

Pecten hastatus G. B. Sowerby II 1842; *P. comatus* Valencienne 1846; *P. rastellinum* Valenciennes 1846; *P. hericus* Gould 1850; *P. altiplectus* Conrad 1857; *P. altiplicatus* Conrad 1857; *P. (Chlamys) lawsoni* R. Arnold 1906; *P. islandicus pugetensis* Oldroyd 1920; *Pecten newcombi* Oldroyd 1938; *Chlamys hastata ellisi* Hertlein and Grant 1972.

Type locality: San Diego, California. Distribution: Afognak Island and the Kenai Peninsula, Alaska, to San Diego, California; intertidal zone to 160 m.

Chlamys rubida (Hinds, 1845). Reddish or pink scallop.

Pecten rubidus Hinds 1845; *P. hindsii* Carpenter 1864, 1865; *P. hericius navarchus* Dall 1898; *P. (Chlamys) jordani* R. Arnold 1903; *P. kincaidi* Oldroyd 1920; *P. (Chlamys) islandicus picoensis* Waterfall 1929; *P. (Chlamys) venturaensis* Waterfall 1929; *P. hindsii clemensi* Oldroyd 1935; *P. clemensae* Oldroyd 1938; *Chlamys (Chlamys) rubida prerubida* MacNeil 1967; *C. durhami* Adegoke 1969; *C. hindsi asiatica* Scarlato 1981.

Type locality: Alaska. Distribution: Albatross Bank, Kodiak Island, east to Kenai Peninsula, Alaska, and south to San Diego, California (but rare south of Puget Sound), west to Kasatochi Island, Aleutian Islands, and in Asia from the Bering Sea to northern Japan; 1–200 m; common.

Crassadoma gigantea (J. E. Gray, 1825). Giant rock-scallop.

Lima gigantea J. E. Gray 1825; *Hinnita poulsoni* Conrad, 1834; *Hinnites crassa* Conrad 1857; *Pecten (Chlamys) multirugosus* Gale, 1928; *P. (Chlamys) multirugosus crassiplicatus* Gale 1928.

Type locality: Juan de Fuca Strait. Distribution: Montague Strait, Prince William Sound, Alaska, south to Bahia Magdalena, Baja California Sur, and on Isla Guadalupe, Baja California; intertidal zone to 80 m.

Delectopecten vancouverensis (Whiteaves, 1893). Vancouver scallop.

Pecten (Pseudamussium) vancouverensis Whiteaves 1893; *Pecten randolphi* Dall 1897; *P. whiteavesi* Orcutt 1915; *Pecten (Pseudamusium) randolphi tillamookensis* R. Arnold 1906; *P. (Pseudamiusum) arces* Dall 1913; *P. (Pseudamusium) vancouverensis fernandoensis* Hertlein 1925; *Cyclopecten argenteus* F. R. Bernard 1978.

Type locality: Forward Inlet, Quatsino Sound, Vancouver Island, British Columbia, Canada. Distribution: Prince William Sound, Alaska, south to Islas San Benito and Isla Cedros, Baja California, and off Guaymas, Sonora, Mexico, and Kamchatka to northern Japan; 27–4100 m; common.

Patinopecten caurinus (Gould, 1850). Weathervane scallop.

Pecten caurinus Gould 1850; *P. heermannii* Conrad 1855; *P. meekii* Conrad 1857; *P. (Pecten) merriami* R. Arnold 1906; *P. oregonensis* Howe 1922.

Type locality: Port Townsend, Admiralty Inlet, Puget Sound, Washington. Distribution: Amlia Island and Unalaska Island, north of Unimak Island, Aleutian Islands, throughout the Gulf of Alaska, to Point Sur, California; 10–200 m; common; commercially harvested.

Family Propeamussidae

Cyclopecten davidsoni (Dall, 1897). Salmon glass-scallop.

Pecten davidsoni Dall 1897; *Propeamussium (Parvamussium) davidsoni* Grau 1959.

Type locality: Davidson Bank (Bering Sea), Alaska. Distribution: Unimak Pass and Unalaska Island, Bering Sea, Aleutian Islands, west to Bowers Bank, south to Tillamook Head, Oregon, and off Kamchatka; 146–650 m; common.

Cyclopecten greenlandicus (G. B. Sowerby II, 1842). Greenland glass-scallop.

Pecten vitreus J. E. Gray 1824; *P. greenlandicus* G. B. Sowerby II 1842; *P. groenlandicus, auctt., nomen vanum; Pseudamusium andersoni* Dall 1919; *Pecten (Pseudamusium) binominatus* Hanna 1924, *nomen novum pro P. (Pseudamusium) andersoni* Dall, non *P. (Plagiopecten [sic]) andersoni* R. Arnold 1906.

Type locality: Greenland. Distribution: Panarctic; recorded in the Beaufort Sea off northern Alaska; an isolated population occurs off British Columbia; in the Atlantic south to Norway, and Iceland; 19–2560 m.

Parvamussium alaskense (Dall, 1871). Alaska glass-scallop.

Pecten (Pseudamussium) alaskensis Dall 1871; *Pecten (Propeamusium) riversi* R. Arnold 1906; *P. (Propeamusium) levis* Moody 1916; *P. calamitus* Hanna 1924; *Pecten intuscostatus multicostatus* Yokoyama 1926; *P. intuscostatus sawanensis* Hertlein 1931, *nomen novum pro P. intuscostatus multicostatus* Yokoyama.

Type locality: Port Etches, Chugach Gulf, Alaska. Distribution: Throughout the Bering Sea, from the Pribilof Islands to Bristol Bay, Alaska, south to San Diego, California, and west to the Sea of Okhotsk and northern Japan; 15–1530 m; common.

Parvamussium intuscostatum (Yokoyama, 1920).

Pecten intuscostatum Yokoyama 1920; *Parvamussium (Polynemamussium) uschakovi* Scarlato 1960.

Type locality: Japan. Distribution: Aleutian Islands; Northwest Pacific; depth unknown.

Remarks: Specimens of *P. uschakovi* from the Aleutian Islands were identified by Paul Scott and are housed at the Santa Barbara Museum of Natural History (Clark[4]).

Superfamily Anomioidea

Family Anomiidae

Pododesmus (Monia) macrochisma (Deshayes, 1839). Green false-jingle.

Anomia macrochisma Deshayes 1839; *Placunamonia cepio* J. E. Gray 1850; *Placunanomia alope* J. E. Gray 1850; *Pododesmus newcombei* B. L. Clark and Arnold 1923; *Anomia denticostulata* Yokoyama 1925; *Pododesmus macroschismus ezoanus* Kanehara 1942.

Type locality: Kamchatka. Distribution: Wainright, Arctic Ocean; Pribilof Islands, Bering Sea, throughout the Aleutian Islands west to the Kuril Islands and northern Japan, and south to Bahia Magdalena, Baja California Sur, and in the southern Gulf of California at Arena Bank and near Guaymas, Sonora, Mexico; intertidal zone to 90 m; common.

Subclass Heterodonta

Superfamily Lucinoidea

Family Lucinidae

Lucinoma annulatum (Reeve, 1850). Ringed lucine.

Lucina annulata Reeve 1850; *Phacoides annulatus* (Reeve 1850); *Erycina balliana* Dall 1916, *nomen nudum; Lucinoma densilineata* Dall 1919; *Woodia concentrica* Yokoyama 1920.

Type locality: California. Distribution: Kodiak Island and Prince William Sound, Alaska, to the Gulf of California as far north as Guaymas, Sonora, Mexico, and Isla Smith, Baja California Sur, and as far south as Isla Monserrate, also from Hokkaido to Kyushu, Japan; intertidal zone to 665 m.

Parvilucina tenuisculpta (Carpenter, 1864). Fine-lined lucine.

Lucina tenuisculpta Carpenter 1864; *Phacoides tenuisculptus* (Carpenter 1864).

Type locality: Vancouver Island, British Columbia. Distribution: Kodiak Island and Galena Bay, Prince William Sound, Alaska, to Isla Cedros, Baja California; subtidal zone to 300 m.

Family Ungulinidae

Diplodonta aleutica Dall, 1901. Aleutian diplodon.

Diplodonta torelli aleutica Dall 1901.

Type locality: Kiska Harbor, Aleutian Islands. Distribution: American Arctic from Point Barrow, Alaska, throughout the Bering Sea, south to Kodiak Island, Alaska, east to Cook Inlet, and west to Kamchatka and northern Japan; low intertidal zone to 60 m.

Diplodonta impolita S. S. Berry, 1953.

Type locality: Forrester Island, Alaska. Distribution: Kodiak Island, Alaska, to Oregon; intertidal zone to 100 m.

Family Thyasiridae

Adontorhina cyclia S. S. Berry, 1947. Circle axinopsid.

Genaxinus filatovae M. B. Ivanova and Moskalets 1984.

Type locality: San Pedro, California. Distribution: Bering Sea in the Navarin and Zhemchug basins, and Kasitsna Bay, Alaska, to Isla Guadalupe, Baja California, and one specimen in the Gulf of California, and in the western Pacific from Sakhalin Island to the southern Kuril Islands and Peter the Great Bay; 12–3000 m.

Adontorhina sphaericosa P. H. Scott, 1986.

Type locality: Boca de Quadra fjord, Southeast Alaska. Distribution: Smeaton Bay, Alaska, to San Francisco, California; 95–3000 m.

Axinopsida serricata (Carpenter, 1864). Lenticular axinopsid.

Cyptodon serricatus Carpenter 1864; *C. sericatus, auctt., nomen nullum; Axinopsis orbiculata inequalis* Verrill and Bush 1898; *A. viridis* Dall 1901.

Type locality: Catalina Island, California. Distribution: Circumboreal and panarctic; Point Barrow, Alaska, in the Bering Sea and Gulf of Alaska to Punta San Pablo, Baja California Sur; central Gulf of California; western Pacific from Kamchatka Peninsula to northern Japan, western Atlantic from Labrador and Baffin Island; low intertidal zone to 275 m.

Conchocele bisecta (Conrad, 1849). Giant cleftclam.

Venus bisecta Conrad, 1849; *Thyasira bisecta* (Conrad 1849); *Conchocele disjuncta* Gabb, 1866; *Cryptodon investigatoris* E. A. Smith, 1895; *Thasira bisecta nipponica* Yabe and Nomura, 1925; *T. quadrata* Yabe and Nomura, 1925; *T. (Conchocele) bisectoides* Kuroda, 1931; *T. bisecta humila* Krishtofovich, 1936; *T. bisecta alta* Krishtofovich, 1936; *T. disjuncta ochotica* Krishtofovich, 1936; ?*T. clarki* Krishtofovich, 1936; ?*Conchocele scarlatoi* M. B. Ivanova and Moskalets, 1984.

Type locality: Washington. Distribution: Throughout the southern Bering Sea from Pribilof Islands, south to Humboldt Bay, California, and from the Sea of Okhotsk to Hokkaido and the Sea of Japan; 50–750 m.

Mendicula ferruginosa (Forbes, 1844). Rusty axinopsid.

Thyasira ferruginosa Forbes 1844; *Cryptodon rotundatus* S. V. Wood 1840, *nomen nudum; Kellia ferruginosa* Forbes 1844; *Leptaxinus oyamai* Habe 1961; *Aligena (Odontogena) borealis* I. M. Cowan 1964.

Type locality: Not traced. Distribution: Circumboreal and Arctic; Pribilof Islands, Bering Sea, to San Francisco, California; western Pacific from Kamchatka to northern Japan; western Atlantic from Georges Bank south to Cape Hatteras, North Carolina, and Mediterranean and the eastern Atlantic, as well as in the North American, West European Cape Verde, Angola and Argentine basins; 40–4475 m.

Thyasira flexuosa (Montagu, 1803). Flexuose cleftclam.

Tellina flexuosa Montagu 1803; *Lucina sinuate* Lamarck 1818; *Axinus unicarinatus* Nyst 1835; *Ptychina biplicata* R. A. Philippi 1836; *Lucina gouldii* R. A. Philippi 1845; *Axinus sarsii* R. A. Philippi 1845; *A. flexuosa polygona* Jeffreys 1864; *A. f. rotunda* Jeffreys 1881; *Cryptodon barbarensis* Dall 1890; *C. insignis* Verrill and Bush 1898; *C. planus* Verrill and Bush 1898; *C. (Axinulus) inaequalis* Verrill and Bush 1898; *Thyasira cygnus* Dall 1916, *nomen nudum; T. wajampolkana* Krishtofovich 1936; ?*T. (Thyasira) tokungai* Kuroda and Habe 1951 [*nomen novum pro T. gouldi* R. A. Philippi, of Yabe and Nomura 1925].

Type locality: Great Britain. Distribution: Circumboreal and circum-Arctic; Beaufort Sea, Alaska, to Point Loma, California, and to the Gulf of California; south to North Africa in the eastern Atlantic; to Florida in the western Atlantic; to Hokkaido, Japan, in the western Pacific; 20–3000 m.

Wallerconcha sarae Valentich-Scott and Powell, 2014.

Type locality: Canning Seafloor Mound, Beaufort Sea, Alaska (71.317°N, 143.999°W). Distribution: Known only from the type locality; 2358 m.

Superfamily Astartoidea

Family Astartidae

Astarte arctica (J. E. Gray, 1824). Arctic astarte.

Crassina arctica J. E. Gray 1824; *Astarte cyprinoides* A. Duval 1841; *A. rollandi* Bernardi 1859; *Tridonta cagnii* Pollonera 1901; *Astarte rollandi loxia* Dall 1903; *A. actis* Dall 1919, *nomen nudum; A. arctica broweri* C. L. Meek 1923; *A. teshioensis* Yokoyama 1926; *Astarte (Tridonta) rollandi kurilensis* Petrov 1982.

Type locality: Northern seas. Distribution: Arctic coast of Alaska, throughout the Bering Sea and the Gulf of Alaska to Cook Inlet, Alaska, and south to Cape Flattery, Washington; European Arctic and to Kamchatka in western Pacific; 20–300 m.

Astarte borealis (Schumacher, 1817). Boreal astarte.

Tridonta borealis Schumacher 1817; *Astarte plana* J. Sowerby 1817; *Crassina semisulcata* Leach 1819; *C. corrugata* T. Brown 1827; *C. depressa* T. Brown 1827; *Mactra veneriformis* W. Wood 1828; *Astarte lactea* Broderip and G. B. Sowerby I 1829; *Crassina multicostata* J. Smith 1839; *C. withami* J. Smith 1839; *Astarte corrugata* Middendorf 1849; *A. richardsoni* Reeve 1855; ?*A. fabula* Reeve 1855; *A. semisulcata placenta* Mörch 1869, *nomen nudum; A. producta* G. B. Sowerby II 1874; *A. semisulcata rhomboidalis* Leche 1883; *A. borealis crassa* Pfeffer 1886; *A. borealis sericea* Posselt 1895; *Tridonta cavalli* Pollonera 1901; ?*A. soror* Dall 1903; ?*A. leffingwelli* Dall 1920; *A. borealis sibirica* Deriugin 1932; *A. nortonensis* MacNeil, in MacNeil et al. 1943; *A. borealis ovata* Filatova 1957, *nomen nudum; A. borealis pseudoactis* Merklin and Petrov, in Merklin et al. 1962; *A. (Tridonta) olchovica* Petrov 1982.

Type locality: Not traced. Distribution: Circum-Arctic and circumboreal; Chukchi and Beaufort seas to Point Barrow, throughout the Bering Sea, to Chatham Sound, British Columbia, and west to the Sea of Okhotsk and the Sea of Japan; intertidal zone to 50 m; common.

Astarte compacta Carpenter, 1864. Compact astarte.

Astarte polaris Dall 1903; *A. willetti* Dall 1917.

Type locality: Puget Sound, Washington. Distribution: Shumagin Islands, through the Gulf of Alaska to Prince William Sound, Alaska, south to Puget Sound, Washington; 10–200 m.

Astarte crenata (J. E. Gray, 1824). Crenulate astarte.

Nicania crenata J. E. Gray 1824; *Astarte quadrans* Gould 1841; *A. semisulcata* Möller 1842; *A. crebricosta* M'Andrew and Forbes 1847; *A. crebrilirata* S. V. Wood 1853; *A. intermedia* G. B. Sowerby II 1854; *A. subaequilatera* G. B. Sowerby II 1854; *A. subaequilatera whiteavesii* Dall 1903; *A. crenata inflata* Hägg 1904; *A. crenata incostata* Hägg 1904; *A. crenata typica* Jensen 1912; *A. crenata quadrata* Filatova 1957, *nomen nudum; A. ecostata* Filatova 1957, *nomen nudum; A. multicostata* Filatova 1957; *A. derjungini* Filatova 1957; *A. crenata sulcatoides* Nesis 1964; *A. (Tridonta) filatovae* Habe 1964, *nomen novum pro A. multicostata* Filatova.

Type locality: Not stated (Rosenberg, 2009). Distribution: Circumboreal and Circum-Arctic; Beaufort Sea, the Chukchi Sea and in the northern Bering Sea as far south as St. George Island, Pribilof Islands, Alaska, in the North Atlantic from Greenland to Norway, south to Massachusetts; 10–400 m; common.

Astarte elliptica (T. Brown, 1827). Elliptical astarte.

Crassina elliptica T. Brown 1827; *C. ovata* T. Brown 1829; *Astarte alaskensis* Dall 1903; *A. hemicymata* Dall 1920; *A. (Tridonta) alaskensis shinadae* Kanno 1962; *Tridonta zelandica* Janssen and van der Slik 1974; *Elliptica alaskensis derbeki* Scarlato 1981; *Venus compressa* Linnaeus, *auctt., nomen dubium.*

Type locality: Great Britain. Distribution: Circumboreal; Dease Inlet, Arctic coast of Alaska, through the Bering Sea and the Gulf of Alaska, south to Puget Sound, Washington; also south to Great Britain, Greenland, Massachusetts, Siberia, and the Sea of Japan; 20–250 m.

Astarte esquimalti (W. Baird, 1863). Wavy-line astarte.

Crassatella esquimalti W. Baird 1863; *Rictocyma mirabilis* Dall 1871; *Astarte (Gonilia?) diversa* Dall 1920; *Rictocyma zenkevitchi* Filatova 1957.

Type locality: Esquimalt Harbor, Vancouver Island, British Columbia. Distribution: Beaufort Sea and Chukchi Sea; south throughout the Bering Sea and the Gulf of Alaska to Puget Sound, Washington; west to the Sea of Okhotsk; 50–200 m.

Astarte montagui (Dillwyn, 1817). Narrow-hinge astarte.

Venus compressa Montagu 1808; *V. montagui* Dillwyn 1817, *nomen novum pro V. compressa* Montagu; *Nicania banksii* Leach 1819; *N. striata* Leach 1819; *Crassina oblique* T. Brown 1827; *C. convexiuscula* T. Brown 1827; *Astarte globosa* Möller 1842; *A. laurentiana* Lyell 1845; *A. pulchella* R. A. Philippi 1845; *A. warhami* A. Hancock 1846; *A. abbreviata* G. B. Sowerby II 1874; *A. semilirata* G. B. Sowerby II 1874; ?*A. compressa crassa* Leche 1878; *A. compressa depressa* Posselt 1895; *A. laurentiana sororr* Dall 1903; *A. montagui typica* Jensen 1912; ?*A. martini* Dall 1920; *Nicania montagui orientalis* Scarlato 1981.

Type locality: Scotland. Distribution: Circumboreal and circum-Arctic; Beaufort Sea to Point Barrow, south to Norton Sound and Kamchatka, and south to Scotland, Greenland, and Massachusetts; 10–455 m.

Astarte vernicosa Dall, 1903. Varnished astarte.

Astarte bennettii Dall 1903; *A. aomoriensis* Nomura and Hatai 1935.

Type locality: Icy Cape, Arctic. Distribution: Point Barrow, Alaska, throughout the Bering Sea, east along the Aleutian Islands to Atka Island; north to Bennett Island in the East Siberian Sea, and south to Hokkaido and the Sea of Japan; 20–250 m.

Superfamily Carditoidea

Family Carditidae

Cyclocardia (Crassicardia) crassidens (Broderip and G. B. Sowerby I, 1829). Thick carditid.

Astarte crassidens Broderip and G. B. Sowerby I 1829; *Venericardia crassidens* (Broderip and G. B. Sowerby I 1829); *Cardita borealis paucicostata* Krause 1855; *Venericardia (Cyclocardia) rudis* Dall 1903; *Cardita matitukensis* Slodkevich 1938; *C. (Cyclocardia) subcrassidens* MacNeil, in MacNeil et al. 1943.

Type locality: Arctic Ocean. Distribution: Point Barrow, Alaska; Bering Sea, south to Cook Inlet and Prince William Sound, Alaska; south to Okisollo Channel, Strait of Georgia, British Columbia; west to Kamchatka and northern Japan; 1–200 m.

Cyclocardia (Cyclocardia) crebricostata (Krause, 1885). Many-ribbed carditid.

Cardita borealis crebricostata Krause 1885; *Venericardia crebricostata* (Krause 1885); *Venericardia alaskana* Dall 1903; *Cardita piltunensis* Slodkevitch 1938; *C. (Cyclocardia) crebricostata nomensis* MacNeil, in MacNeil et al. 1943.

Type locality: St. Paul Island, Alaska. Distribution: Point Barrow, Alaska, throughout the Bering Sea, south to Kodiak Island and Prince William Sound, Alaska, and west to Sakhalin Island; 10–260 m.

Cyclocardia (Cyclocardia) incisa (Dall, 1903). Cut carditid.

Venericardia (Cyclocardia) incisa Dall 1903.

Type locality: Unalaska, Aleutian Islands. Distribution: Southern Bering Sea west to Nazan Bay, Atka Island, Aleutian Islands, south to Kodiak Island, throughout the Gulf of Alaska, to Cook Inlet, Alaska, and west to the Sea of Okhotsk and northern Japan; 1–135 m.

Cyclocardia (Cyclocardia) ovata (Riabinina, 1952). Ovate carditid.

Venericardia (Cyclocardia) borealis ovata Riabinina 1952; *Cyclocardia rjabininae* (Scarlato), *auctt.*, non Scarlato 1955.

Type locality: Chukchi Sea and Bering Strait. Distribution: Bering Sea, Pribilof Islands, and Amchitka Island, Aleutian Islands, west to the Chukchi Peninsula; 20–150 m.

Cyclocardia (Cyclocardia) umnaka (Willett, 1932). Aleutian carditid.

Cardita umnaka Willett 1932.

Type locality: Umnak Island, Aleutian Islands. Distribution: Type locality and Unalaska Island, Aleutian Islands; known only from beach drift.

Cyclocardia (Cyclocardia) ventricosa (Gould, 1850). Stout carditid.

Cardita ventricosa Gould 1850; *Venericardia (Cyclocardia) stearnsii* Dall 1903; *Cardita hilli* Willett 1944; *C. ventricosa redondoensis* T. A. Burch, in J. Q. Burch 1944; *Cardita (Cyclocardia) v. montereyensis* A. G. Smith and Gordon 1948.

Type locality: Puget Sound, Washington. Distribution: Cook Inlet and Prince William Sound, Alaska, to Punta Rompiente, Baja California Sur; 20–450 m; common and abundant.

Miodontiscus prolongatus (Carpenter, 1864). Elongate carditid.

Miodon prolongatus Carpenter 1864; *Venericardia prolongata* (Carpenter 1864); *Venericardia yatesi* R. Arnold 1907; *Miodontiscus meridionalis* Dall 1916, *nomen nudum; Venericardia nakamurai* Yokoyama 1923.

Type locality: Near Neah Bay, Washington. Distribution: Afognak Island, Middleton Island, and Prince William Sound, Alaska, to Point Loma, California, and from the Kuril Islands to northern Japan (not reported from the Aleutian Islands); 5–210 m.

Superfamily Galeommatoidea

Family Lasaeidae

Boreacola maltzani (Verkrüzen, 1875). Arctic montacutid.

Montacuta maltzani Verkrüzen 1875; *Boreacola vadosa* F. R. Bernard 1979.

Type locality: Vadsoe, Norway. Distribution: Beaufort Sea, Alaska, likely circumboreal, from Norway; 0.5–30 m.

Kellia suborbicularis (Montagu, 1803). Suborbicular kellyclam.

Mya suborbicularis Montagu 1803; *Tellimya lactea* T. Brown 1827; *T. tenuis* T. Brown 1827; *Lepton fabagella* Conrad 1832 (?); *Bornia inflata* R. A. Philippi 1836; *Chironia laperousii* Deshayes 1839; *Bornia luticola* Valenciennes 1846; *Kellia laperousii chironii* Carpenter 1864; *K. rotundata* Carpenter 1864; *Lepton meroeum* Carpenter 1864; *Montacuta gouldi* J. H. Thomson 1867; *Kellia japonica* Pilsbry 1895; *Erycina santarosae* Dall 1916, *nomen nudum; Rochefortia grebnitzskii* Dall 1916, *nomen nudum; Kelllia comandorica* Scarlato 1981.

Type locality: Plymouth, England. Distribution: Circumboreal; from Prince William Sound, Alaska, to Zorritos, Perú, from Iceland to the Mediterranean, from Greenland to New York, and from the Kuril Islands to Honshu, Japan; intertidal zone to 20 m.

Lasaea adansoni (Gmelin, 1791). Reddish lepton.

Tellina adansoni Gmelin 1791; *Cardium rubrum* Montagu 1803; *Amphidesma nucleola* Lamarck 1818; *Bornia seminulum* R. A. Philippi 1836; *Erycina violacea* Scacchi 1836; *Poronea petitiana* Récluz 1843; *Kellia miliaris* R. A. Philippi 1845; *Lasaea rubra pallida* Jeffreys 1864; *Kellia danili* Brusina 1865; *Lasaea rubra subviridis* Stearns 1894, *nomen nudum; L. rubra subviridis* Dall 1899; *Erycina catalinae* Dall 1916, *nomen nudum; Lasaea cistula* Keen 1938.

Type locality: Shores of west Africa. Distribution: Circumboreal and cosmopolitan in temperate and warm water; in the Pacific from Sitka, Alaska, to Isla Lobo de Afuera, Perú; intertidal zone to 10 m.

Mysella planata (Krause, 1885). Flat mysella.

Tellimya planata Krause 1885; *Rochefortia beringensis* Dall 1916, *nomen nudum; Mysella (Rochefortia) derjungini* Gorbunov 1952.

Type locality: Bering Sea. Distribution: Beaufort Sea, south through the Bering Sea and the Gulf of Alaska to Prince William Sound, Alaska, to the Queen Charlotte Islands, British Columbia, and west to Kamchatka and the Kuril Islands; 10–717 m.

Neaeromya compressa (Dall, 1899). Compressed montacutid.

Erycina compressa Dall 1899; *Pseudopythina compressa* (Dall 1899).

Type locality: Bering Sea, south of Nunivak Island. Distribution: Point Barrow, Alaska, to San Diego, California; 10–700 m.

Neaeromya rugifera (Carpenter, 1864). Wrinkled montacutid.

Pythina rugifera Carpenter 1864; *Lepton rude* Whiteaves 1880; *Erycina chacei* Dall 1916, *nomen nudum; Pseudopythina myaciformis* Dall 1916, *nomen nudum.*

Type locality: Puget Sound, Washington. Distribution: Kodiak Island, Alaska, to Punta Rompiente, Baja California Sur; intertidal zone to 56 m.

Remarks: Bysally attached to the abdomen of the burrowing shrimp *Upogebia pugettensis* (Dana, 1852) and the setae of the polychaete *Aphrodite* sp.

Rochefortia tumida (Carpenter, 1864). Robust mysella.

Tellimya tumida Carpenter 1864; ?*Montacuta obtuse* Carpenter 1865; *Mysella aleutica* Dall 1899; *Rochefortia ferruginosa* Dall 1916, *nomen nudum; Mysella sovaliki* N. L. MacGinitie 1959.

Type locality: Puget Sound, Washington. Distribution: Beaufort Sea, Alaska, south to San Diego, California, and in the Gulf of California at Puerto Peñasco, Sonora, Mexico; intertidal zone to 973 m.

Superfamily Glossoidea

Family Vesicomyidae

Vesicomya (Calyptogena) pacifica (Dall, 1891). Pacific vesicomya.

Calyptogena pacifica Dall 1891.

Type locality: Dixon Entrance, Southeast Alaska. Distribution: Kiska Island, Aleutian Islands, throughout the Gulf of Alaska, south to San Diego, California; 550–2000 m.

Superfamily Cardioidea

Family Cardiidae

Ciliatocardium ciliatum (O. Fabricius, 1780). Hairy cockle.

Cardium ciliatum Fabricius 1780; *Clinocardium ciliatum* (Fabricius 1780); *C. islandicum* Bruguière 1789; *C. icelandicum, auctt., nomen nullum;* ?*C. boreale* Broderip and G. B. Sowerby I 1829; *C. arcticum* G. B. Sowerby II 1834; *C. pubescens* Couthouy 1838; *C. dawsoni* Stimpson 1862; *C. hayesii* Stimpson 1863; *C. californiense comoxense* Dall 1900; *C. chikagawaense* Kotaka 1950; *Ciliatocardium ciliatum tchuktchense* Kafanov, in Scarlato 1981; ?*C. likharevi* Kafanov, in Scarlato 1981; *C. ciliatum nordenskioeldi* Kafanov 1981; C.

ciliatum ochotense Kafanov 1981; *Clinocardium (Ciliatocardium) ciliatum*: Coan et al. 2000.

Type locality: Greenland. Distribution: Circum-Arctic and circumboreal; from the Beaufort Sea, throughout the Bering Sea to Amchitka Island, Aleutian Islands, south to Barkley Sound, Vancouver Island, British Columbia, and south to Kamchatka through the Kuril Islands and Sakhalin Island; 10–150 m; common.

Clinocardium (Clinocardium) nuttallii (Conrad, 1837). Nuttall cockle.

Cardium nuttallii Conrad 1837; *C. nuttallianum, auctt., nomen nullum; Cardium californianum* Conrad 1837; *Cochlea corbis* Martyn, *auctt.*, non Martyn 1784; *Cardium californiense* Deshayes 1839; ?*Cardium decoratum* Grewingk 1850; *Clinocardium (Keenocardium) californiense*: Coan et al. 2000.

Type locality: California. Distribution: Punuk Islands, near St. Lawrence Island, and Yukon Delta, west to Dutch Harbor, Unalaska Island, Alaska, through the Gulf of Alaska, and south to San Diego, California; with a disjunct population from Kamchatka to southeastern Hokkaido, Japan; intertidal zone to 30 m, occasionally to 180 m.

Clinocardium (Keenocardium) blandum (Gould, 1850). Low-rib cockle.

Cardium (Serripes) blandum Gould 1850; *Cardium (Cerastoderma) fucanum* Dall 1907; *C. funcanum, auctt. nomen nullum.*

Type locality: Puget Sound, Washington. Distribution: Pribilof Islands, south to Pavlof Bay, Alaska Peninsula, west to Unalaska Island, through the Gulf of Alaska, including Prince William Sound, Alaska, and south to Salt Point, Sonoma County, California; 20–80 m.

Nemocardium (Keenaea) centifilosum (Carpenter, 1864). Hundred-line cockle.

Cardium (?modestum var.*) centifilosum* Carpenter 1864; *Protocardia centifilosa* (Carpenter 1864); *C. richardsoni* Whiteaves 1878.

Type locality: Monterey, California. Distribution: Portlock Bank, northern Gulf of Alaska, to Punta Rompiente, Baja California Sur; 30–150 m.

Nemocardium (Keenaea) centifilosum (Carpenter, 1864). Hundred-line cockle.

Cardium (?modestum var.*) centifilosum* Carpenter 1864; *Protocardia centifilosa* (Carpenter 1864); *C. richardsoni* Whiteaves 1878.

Type locality: Monterey, California. Distribution: Portlock Bank, northern Gulf of Alaska, to Punta Rompiente, Baja California Sur; 30–150 m.

Serripes (Serripes) groenlandicus (Mohr, 1786). Greenland smoothcockle.

Cardium groenlandicum Mohr 1786; *Mactra radiate* Donovan 1803; *Cardium edentula* Montagu 1808; *Aphrodite columba* I. Lea 1837; *Cardium boreale* Reeve 1845, non Broderip and G. B. Sowerby I 1829; *C. fabricii* Deshayes 1855; *Serripes groenlandicus protractus* Dall 1900; *Mactra fujinensis* Yokoyama 1923; ?*Serripes (?) uvutschensis* Il'ina 1963.

Type locality: Greenland. Distribution: Circum-Arctic and circumboreal; Point Barrow, the Chukchi Sea, throughout the Bering Sea continental shelf, to Amchitka Island, Aleutian Islands, south to Puget Sound, Washington; in the North Atlantic from Greenland to New England; in the western Pacific south to Japan; intertidal zone to 80 m; common.

Serripes (Serripes) laperousii (Deshayes, 1839). Broad smoothcockle.

Cardium laperousii Deshayes 1839.

Type locality: California ("*Mers de California*"). Distribution: Point Barrow, Alaska, throughout the Bering Sea, and south to Petersburg, Alaska, and in the western Pacific to the Sea of Okhotsk, Kamchatka, and Korea; 2–80 m; common.

Serripes (Yagudinella) notabilis (G. B. Sowerby III, 1915). Oblique smoothcockle.

Cardium (Serripes) notabile G. B. Sowerby III 1915; *Serripes n. nomurai* Otuka 1943.

Type locality: Wakasa, Japan. Distribution: Western Pacific, from the Bering Sea south to Japan; eastern Pacific from the Pribilof Islands, south to the Alaska Peninsula, and eastward to Cook Inlet and Prince William Sound, Alaska; 50–216 m.

Superfamily Veneroidea

Family Veneridae

Compsomyax subdiaphana (Carpenter, 1864). Milky venus.

Clementia subdiaphana Carpenter 1864; *Cooperella subdiaphana* (Carpenter 1864); *Saxidomus gibbosus* Gabb 1869; *Callista subdiaphana pedroana* R. Arnold; *Clementia oblique* Jukes-Browne 1913; *Meretrix iizukai* Yokoyama 1925.

Type locality: Puget Sound, Washington. Distribution: Cook Inlet and Prince William Sound, Alaska, to Bahia San Quintin, Baja California, and at Puertecitos, Gulf of California; 2–500 m.

Humilaria kennerleyi (Reeve, 1863). Kennerley venus.

Venus kennerleyi Reeve 1863; *Marcia kennerlyi* (Reeve 1863).

Type locality: Puget Sound, Washington. Distribution: Cold Bay, Alaska Peninsula, west to Prince William Sound, Alaska, and south to Santa Rosa Island, California; intertidal zone to 45 m.

Leukoma staminea (Conrad, 1837). Pacific littleneck.

Venus staminea Conrad 1837; *V. straminea, auctt., nomen nullum; Protothaca staminea* (Conrad 1837); *Venerupis petiti*

Deshayes 1839; *Venus pectunculoides* Valenciennes 1846; *V. rigida* Gould 1850; *Tapes diversa* G. B. Sowerby II 1852; *Chione ruderata* Deshayes 1853; *Tapes tumida* Carpenter 1857; *Venus dispar* Carpenter 1857; *V. ampliata* Carpenter 1857; *V. mundulus* Reeve 1863; *Paphia staminea orbella* Carpenter 1864; *Venus (Chione) conradi* Römer 1867, *nomen novum pro V. tumida* (Carpenter), non (G. B. Sowerby II); *Paphia (Protothaca) staminea sulculosa* Dall 1902; *Protothaca grewingkii* Dall 1904.

Type locality: California. Distribution: Attu Island, Aleutian Islands, through the Gulf of Alaska to Prince William Sound, south to Bahia Santa Maria, Baja California Sur, possibly to Cabo San Lucas; western Pacific from the Commander Islands to Hokkaido, Japan; intertidal zone to 10 m.

Liocyma fluctuosa (Gould, 1841). Varnished liocyma.

Venus fluctuosa Gould 1838, *nomen nudum;* 1841; *V. astartoides* Middendorff 1849; *Tapes arctica* Reeve 1864; *Liocyma beckii* Dall 1870; *L. scammoni* Dall 1871; *L. viridis* Dall 1871; *L. fluctuosa brunnea* Dall 1902; *L. aniwana* Dall 1907; *L. subaniwana* Khomenko 1931; *L. schefferi* Bartsch and Rehder 1939; *L. hokkaidoensis* Habe 1951; *Gomphina (Liocyma) fluctuosa praefluctuosa* Krishtofovich, in Zhidkova et al. 1968.

Type locality: Massachusetts. Distribution: Circum-Arctic and circumboreal; Point Barrow, Alaska; Bering Sea; Pacific south to the northwestern tip of Vancouver Island, British Columbia, northern Japan, Sea of Okhotsk; intertidal zone to 104 m.

Nutricola lordi (W. Baird, 1863). Lord dwarf-venus.

Chione lordi W. Baird 1863; *Psephidia lordi* (Baird 1863).

Type locality: Esquimalt Harbor, Vancouver Island, British Columbia. Distribution: Southeastern end of the Bering Sea and Cook Inlet, Alaska, to Punta Pequeña, Baja California Sur; intertidal zone to depths greater than 250 m (Valentich-Scott[9]).

Nutricola tantilla (Gould, 1853). Purple dwarf-venus.

Venus tantillus Gould 1853; *Transennella tantilla* (Gould 1853).

Type locality: Santa Barbara, California. Distribution: Prince William Sound, Alaska, to Isla Cedros, Baja California; intertidal zone to 120 m.

Protothaca (Callithaca) tenerrima (Carpenter, in Gould and Carpenter, 1857). Thin-shell littleneck.

Tapes tenerrima Carpenter, in Gould and Carpenter 1857; *Paphia tenerrima* (Carpenter 1857); *Paphia (Callithaca) tenerrima alta* Waterfall 1929; ?*Paphia restorationensis* Frizzell 1930 [possible hybrid with *P. staminea]*.

Type locality: Panama. Distribution: Baranof Island, Sika Sound, Alaska, to Bahia Thurloe, Baja California Sur; intertidal zone to 30 m.

Saxidomus gigantea (Deshayes, 1839). Washington butterclam.

Venerupis gigantea Deshayes 1839; *Venus maxima* R. A. Philippi 1846; *Saxidomus giganteus brevis* Dall 1916, *nomen nudum.*

Type locality: Not specified. Distribution: Wales, Seward Peninsula, and Kookoolik, St. Lawrence Island, to Kodiak Island and Montague Island, Alaska, to Capitola, California; intertidal zone to 40 m; common. Commercially harvested.

Family Petricolidae

Petricola (Petricola) carditoides (Conrad, 1837). Hearty petricolid.

Saxicava carditoides Conrad 1837; *S. californica* Conrad 1837; *L. legumen* Deshayes 1839; *Petricola arcuata* Deshayes 1839; *P. cylindracea* Deshayes 1839; *P. gibba* Middendorff 1849; *P. mirabilis* Deshayes 1853; *Saxicava abrupta* Conrad 1855; *Petricola pedroana* Conrad 1855.

Type locality: Near Santa Barbara, California. Distribution: Sitka and Kosciusko Island, Alaska, to Punta Pequeña, Baja California Sur; intertidal zone to 46 m.

Family Turtoniidae

Turtonia minuta (O. Fabricius, 1780). Minute turton.

Venus minutus Fabricius 1780; *Mya purpurea* Montagu 1808; *Turtonia occidentalis* Dall 1871; *T. nitida* Verrill 1872.

Type locality: Greenland. Distribution: Circumboreal; Nunivak Island and St. Paul Island, Pribilof Islands, west to Amchitka Island, Aleutian Islands, east to Elrington Island, Prince William Sound, Alaska, and south to Barkley Sound, Vancouver Island, British Columbia; in the western North Atlantic from Greenland to Massachusetts, in the western Pacific from the Kuril Islands to Peter the Great Bay and Honshu, Japan; intertidal zone.

Superfamily Tellinoidea

Family Tellinidae

Macoma balthica (Linnaeus, 1758). Baltic macoma.

Tellina balthica Linnaeus 1758; *T. baltica, auctt., nomen nullum; T. rubra* da Costa 1778; *Venus fragilis* Fabricius 1780; ?*Tellina zonata* Gmelin 1791; *T. solidula* Pulteney 1799; *T. petalum* Valenciennes 1821; *Psammobia fusca* Say 1826; *Tellina inconspicua* Broderip and G. B. Sowerby I 1829; *Sanguinolaria californiana* Conrad 1837; *Tellina graenlandica* Lyell 1839, *ex* Beck MS, *nomen nudum; T. groenlandica* Lyell 1841, *ex* Beck MS; *T. fabricii* Hanley 1846, *nomen novum pro T. fragilis* (Fabricius 1780), non *T. fragilis* Linnaeus 1758; *T. solidula normalis* Middendorff 1851; *T. californica* Carpenter 1857, *ex* Conrad MS, *nomen nudum; T. balthica attenuata, b. minor, b. nivea* Jeffreys 1864; *T. rotundata* G. B. Sowerby II 1867, non Montagu 1803; *T. neustriaca* Locard 1886; *T. rotunda* Salisbury 1934, *nomen novum pro T. rotundata* G. B. Sowerby II, non Montagu; *Macoma (Macoma) balthica takohokoensis* Yamamoto and Habe 1959.

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[9] Valentich-Scott, P. 2016. Personal commun. Department of Malacology, Santa Barbara Museum of Natural History, Santa Barbara, CA 93105.

Type locality: Baltic Sea. Distribution: Circum-Arctic and circumboreal; Beaufort Sea, Alaska, to San Francisco Bay, California; Arctic south to Spain, Georgia, and Japan; intertidal zone to 40 m.

Macoma inquinata (Deshayes, 1855). Pointed macoma.

Tellina inquinata Deshayes 1855; *Macoma inquinata arnheimi* Dall 1916, *nomen nudum; M. inquinata trigonalis* Slodkevich 1936.

Type locality: Vancouver Island, British Columbia. Distribution: Pribilof Islands, Bering Sea, throughout the Aleutian Islands west to Atka Island; along American west coast to Santa Barbara and Mugu Lagoon, California; intertidal zone to 50 m.

Macoma (Macoma) brota Dall, 1916. Heavy macoma.

Tellina edentula Broderip and G. B. Sowerby I 1829, non Spengler 1798; *Macoma brota* Dall 1916, *nomen nudum; nomen novum pro T. edentula* Broderip and G. B. Sowerby I, non Spengler.

Type locality: Bering Strait. Distribution: Throughout the American Arctic from the Canadian Archipelago to Point Barrow, throughout the Bering Sea, in the Aleutian Islands, west to Adak Island, Alaska; south to Puget Sound, Washington; 10–260 m.

Macoma (Macoma) calcarea (Gmelin, 1791). Chalky macoma.

Tellina calcarea Gmelin 1791; *T. lata* Gmelin 1791; *T. sabulosa* Spengler 1798; *Macoma tenera* Leach 1819; *Tellina sordida* Couthouy 1838; *T. proxima* G. B. Sowerby I, in J. E. Gray and G. B. Sowerby I 1839, *ex* Brown MS, non J. Smith 1839; *T. frigida* Hanley 1844; *T. lata nasuta* Middendorff 1849, non *T. nasuta* Conrad 1837, a *Macoma; T. dissimilis* von Martens 1865, non Deshayes 1855; *M. sitkana* Dall 1900; *M. calcarea obliqua* Soot-Ryen 1932, non *Tellina obliqua* J. Sowerby 1817, a *Macoma; M. calcarea longisinuata* Soot-Ryen 1932; *M. calcarea sootryeni* Petrov 1966, *ex* Scarlato MS; *Abrina tatarica* Scarlato 1981.

Type locality: Iceland or Greenland. Distribution: Circum-Arctic and circumboreal; Point Barrow, Alaska, through the Bering Sea and southeast Alaska, to Newport, Oregon; south to Tosa Bay, Japan; to Norway, Iceland, and New York in the Atlantic; 10–360 m; common.

Macoma (Macoma) crassula (Deshayes, 1855). Thick macoma.

Tellina crassula Deshayes 1855; *Macoma inflata* Dawson 1872, *ex* Stimpson MS; *Tellina nipponica* Tokunaga 1906.

Type locality: Northern Ocean. Distribution: Gulf of St. Lawrence and the adjacent North Atlantic, and from Nunivak Island, Bering Sea, and from Japan; 160–375 m.

Macoma (Macoma) elimata Dunnill and Coan, 1968. Beveled macoma.

Type locality: Moresby Island, Satellite Channel, Vancouver Island, British Columbia. Distribution: Unalaska Island, Aleutian Islands, east to Albatross Bank, Kodiak Island and Galena Bay, Alaska, south to Redondo Beach, California; 9–435 m.

Macoma (Macoma) golikovi Scarlato and Kafanov, 1988. Oval macoma.

Macoma orbiculata Scarlato 1981, non Kanno 1958; *M. golikovi* Scarlato and Kafanov 1988, *nomen novum pro M. orbiculata* Scarlato, non Kanno; *M. lukini* Kamenev 1989; *Tellina obliqua* J. Sowerby, *auctt.*, non J. Sowerby 1817; *Tellina incongrua* von Martens, *auctt.*, non von Martens 1865.

Type locality: Russian Far East seas. Distribution: Point Barrow to Kasitsna Bay, Alaska, and south to Puget Sound, Washington; from Sakhalin Island to the Sea of Japan; intertidal zone to 200 m.

Macoma (Macoma) lama Bartsch, 1929. Aleutian macoma.

Macoma planiuscula U. S. Grant and Gale 1931; *M. lama meridionalis* Scarlato 1981.

Type locality: Gulf of Peter the Great. Distribution: North American Arctic from Amundsen Gulf, Canada, to Cape Beaufort, Chukchi Sea; Bering Sea to the Pribilof Islands; North Pacific south to Queen Charlotte Islands, British Columbia; west to Kamchatka; intertidal zone to 185 m.

Macoma (Macoma) lipara Dall, 1916. Sleek macoma.

Macoma brota lipara Dall, 1916, *nomen nudum.*

Type locality: Just south of Bering Strait. Distribution: Northern Bering Sea to Cordova, Alaska; North Pacific south to Redondo Submarine Canyon, California; 20–260 m.

Macoma (Macoma) loveni (Jensen, 1905). Inflated macoma.

Tellina (Macoma) moesta loveni Johnstrup 1882, *ex* Steenstrup MS, *nomen nudum; T. (M.) loveni* Jensen 1905, *ex* Steenstrup MS; *Abrina sachalinica* Scarlato 1981.

Type locality: Greenland. Distribution: Circum-Arctic; in North America from Pitt Point, Beaufort Sea, to Point Barrow in the western Bering Sea; from Kamchatka to northern Japan; 4–816 m.

Macoma (Macoma) middendorffi Dall, 1884. Middendorff macoma.

Macoma (edentula var.?) *middendorffi* Dall 1884; *M. middendorffii, auctt., nomen nullum; Nipponopagia ommaensis* Ogasawara 1977.

Type locality: Bering Sea. Distribution: Point Barrow to Bristol Bay, Alaska; west to southeastern Kamchatka; 25–35 m.

Macoma (Macoma) moesta (Deshayes, 1855). Flat macoma.

Tellina moesta Deshayes 1855; *Macoma calcarea subovalis* Posselt 1895; *M. alaskana* Dall 1900; *M. krausei* Dall 1900; *M. oneilli* Dall 1919.

Type locality: Northern Ocean. Distribution: Arctic Ocean from Hudson Bay to Point Barrow into and throughout the Bering Sea, east to Chignik Bay on the Alaska Peninsula, westward to Kamchatka, and south to northern Japan; also from Kodiak Island, south to Coos Bay, Oregon; intertidal zone to 300 m.

Macoma (Macoma) torelli (Jensen, 1905). Triangular macoma.

Tellina (Macoma) crassula torelli Johnstrup 1882, *ex* Steenstrup MS, *nomen nudum; T. (M.) torelli* Jensen 1905, *ex* Steenstrup MS.

Type locality: Greenland. Distribution: Circum-Arctic; Beaufort Sea to Point Barrow and in the northern Bering Sea, Alaska; 20–200 m.

Macoma nasuta (Conrad, 1837). Bent-nose macoma.

Tellina nasuta Conrad 1837; *T. tersa* Gould 1853; *Macoma kelseyi* Dall 1900; *M. jacalitosana* R. Arnold 1910.

Type locality: Near San Diego, California. Distribution: Eastern Pacific from Montague Island, Cook Inlet, Alaska, to Punta Rompiente and perhaps Cabo San Lucas, Baja California Sur; intertidal zone to 50 m.

Macoma (Psammacoma) carlottensis Whiteaves, 1880. Charlotte macoma.

Marcoma leptonoidea Dall 1895; *M. inflatula* Dall 1897; *M. quadrana* Dall 1916, *nomen nudum; M. quadrans, auctt, nomen nullum.*

Type locality: Virago Sound, Graham Island, Queen Charlotte Islands. Distribution: Adak Island, eastward to Lituya Bay, Alaska, and southward to Islas Los Coronados, Baja California, and in the central Gulf of California; subtidal zone to 1550 m.

Macoma (Psammacoma) yoldiformis Carpenter, 1864. Yoldia macoma.

Type locality: Neah Bay, Washington. Distribution: Sitka, Alaska, to Bahia San Bartolomé, Baja California Sur; intertidal zone to 100 m.

Macoma (Rexithaerus) dexioptera R. Baxter, 1977. Rightwing macoma.

Type locality: MacLeod Harbor, Montague Island, Prince William Sound, Alaska. Distribution: North of Isanotski Strait,Unimak Island, to Montague Island, Prince William Sound, and to Sitka, Alaska; depth unknown.

Macoma (Rexithaerus) expansa Carpenter, 1864. Expanded macoma.

Macoma liotricha Dall 1897.

Type locality: Puget Sound, Washington. Distribution: Nunivak Island, Bering Sea, and Attu Island, Aleutian Islands, and south to Oceano, California; intertidal zone to 30 m.

Tellina (Angulus) carpenteri Dall, 1900. Carpenter tellin.

Angulus variegatus Carpenter 1864, non *Tellina variegata* Gmelin 1791; *Tellina (Angulus) carpenteri* Dall 1900, *nomen novum pro T. variegata* (Carpenter), non *Gmelin; Tellina (Moerella) arenica* Hertlein and Strong 1949.

Type locality: Neah Bay, Washington. Distribution: Sitka, Alaska; Gulf of California, south to Panama; intertidal zone to 823 m.

Tellina (Angulus) modesta (Carpenter, 1864). Plain tellin.

Angulus modesta Carpenter 1864; *Angulus modestus obtusus* Carpenter 1864, non *Tellina obtusa* J. Sowerby 1817; *Tellina (Oudardia) buttoni* Dall 1900, *nomen novum pro T. obtusa* Carpenter, non. J. Sowerby.

Type locality: Puget Sound, Washington. Distribution: Cook Inlet, Alaska, to Bahia San Bartolomé, Baja California Sur; intertidal zone to 100 m; common.

Tellina (Cadella) nuculoides (Reeve, 1854). Salmon tellin.

Donax nuculoides Reeve 1854; *Maera salmonea* Carpenter 1864.

Type locality: Not traced. Distribution: Southeastern Bering Sea from the Pribilof Islands and Attu Island, Aleutian Islands, to Cook Inlet, Alaska; south to Islas los Coronados, Baja California; intertidal zone to 75 m.

Tellina (Megangulus) lutea W. Wood, 1828. Alaska great-tellin.

Tellina lutea W. Wood 1828; *T. alternidentata* Broderip and G. B. Sowerby I 1829; *T. guildfordiae* Griffith and Pidgeon 1834.

Type locality: Icy Cape, Arctic. Distribution: American Arctic coast from Cape Kruzenstern, Canada, to Cape Beaufort; Chukchi Sea; Bering Sea; Pribilof Islands to Cook Inlet, Alaska; western Pacific to Kamchatka, northern Japan and Korea; intertidal zone to 100 m.

Tellina (Peronidia) bodegensis Hinds, 1845. Bodega tellin.

Tellina bodegensis Hinds 1845; *T. santarosae* Dall 1900.

Type locality: Russian Bodegas, near Bodega Bay, California. Distribution: Sitka, Alaska, to Bahia Magdalena, Baja California Sur; intertidal zone to 100 m.

Family Psammobiidae

Gari (Gobraeus) californica (Conrad, 1849). California sunsetclam.

Psammobia californica Conrad 1837 (figure only, no name), 1849; *Sanguinolaria rubroradiata* Carpenter 1857, *ex* Nuttall MS, *nomen nudum; Psammobia rubroradiata* Carpenter 1864, *ex* Nuttall MS; *P. lilacina* Wilkins, in Palmer 1958, *ex* Carpenter MS, *nomen nudum*.

Type locality: California. Distribution: Kachemak Bay, Kenai Peninsula, and Prince William Sound, Alaska, throughout Puget Sound, west to Neah Bay, Washington; Portugese Beach, Mendocino County, California, to Bahia Magdalena, Baja California Sur; low intertidal zone to 280 m.

Remarks: Coan et al. (2000) considered *Gari kazusensis* (Yokoyama 1922), distributed in the western North Pacific, a junior synonym of *G. californica*. However, Lutaenko (2009) resurrected it based on a detailed examination of morphological characters, calling into question the status of *G. californica sensu lato* as an amphi-Pacific species. Molecular studies should be able to shed more light on this dilemma.

Family Semelidae

Semele (Semele) rubropicta Dall, 1871. Rose-painted semele.

Semele ashleyi Hertlein and Grant 1972.

Type locality: Soquel, Monterey Bay, California. Distribution: Seldovia Bay, Kenai Peninsula, Alaska, to Puget Sound,Washington; Van Damme State Beach, Mendocino County, California, to Isla Asunción, Baja California Sur, and in the central Gulf of California at Bahia Willard, Baja California, and Guaymas, Sonora; intertidal zone to 100 m.

Superfamily Solenoidea

Family Pharidae

Siliqua alta (Broderip and G. B. Sowerby I, 1829). Alaska razor.

Solen altus Broderip and G. B. Sowerby I 1829; *S. alata, auctt., nomen nullum; S. tenuis* Broderip and G. B. Sowerby I 1829, non W. Wood 1828; *S. medius* G. B. Sowerby I, in J. E. Gray and G. B. Sowerby I 1839; *Machaera sodalis* Gould 1861; *Siliqua intuspurpurea* Pilsbry 1905; *S. sloati* Hertlein 1961.

Type locality: Arctic Ocean. Distribution: Chukchi Sea, throughout the Bering Sea to Cold Bay, Alaskan Peninsula, east to Cook Inlet, Alaska, south to Point Conception, California, in the western Pacific from the Kamchatka Peninsula and the Kuril Islands to northern Japan; low intertidal zone to 85 m; common.

Siliqua patula (Dixon, 1789). Pacific razor.

Solen patulus Dixon 1789; *S. maximus* W. Wood 1815, non Gmelin 1791; *S. gigas* Dillwyn 1817; *Solecurtus nuttallii* Conrad 1837; *Solen splendens* Chenu 1843; ?*S. americanus* Chenu 1843; *Siliqua californica* Conrad 1867.

Type locality: Cook's River, northwestern coast of America. Distribution: Cook Inlet, Alaska, to Morro Bay, California; intertidal to 55 m; common.

Superfamily Mactroidea

Family Mactridae

Mactromeris polynyma (Stimpson, 1860). Arctic surfclam.

Mactra similes W. Wood 1828, non Say 1822; *M. grandis* Deshayes 1832, non Gmelin 1791; *M. ovalis* Gould 1840, non J. Sowerby 1817; *M. ponderosa* R. A. Philippi 1844, non Eichwald 1830, non Conrad 1830; *M. polynyma* Stimpson 1860; *Spisula polynympha, polynema, auctt., nomen nullum; Mactra (Spisula) grayana* Schrenck 1867; *Callista voyi* Gabb 1869; *Spisula (Hemimactra) alaskana* Dall, 1894, *nomen nudum; Spisula alaskensis* Dall 1909, *nomen nudum; S. (Hemimactra) alaskana* Dall 1921; *S. vladivostokensis* Bartsch 1929; *S. (Mactromeris) voyi korolevae* Zhidkova, in Zhidkova et al. 1972.

Type locality: Eastern coast of North America. Distribution: Circumboreal; Peard Bay (Chukchi Sea), throughout the Bering Sea, south to Puget Sound, Washington, and west to the Sea of Okhotsk and Kamchatka; in the Atlantic from Hudson Bay to Massachusetts; low intertidal zone to 110 m; common.

Tresus capax (Gould, 1850). Fat gaper.

Lutraria maxima Middendorff 1849, non Jonas; *L. capax* Gould 1850; *Schizothaerus nuttallii capax* (Gould).

Type locality: Puget Sound, Washington. Distribution: Shumagin Islands and Kachemak Bay, Cook Inlet, Alaska, to Oceano, California; middle intertidal zone to 20 m; common.

Tresus nuttalli (Conrad, 1837). Pacific gaper.

Lutraria (Cryptodon) nuttallii Conrad 1837; *L. maxima* Jonas 1844; *L. inflata* Dunker 1853; *Spisula longa* Dall 1921; *Schizothaerus nuttallii bighopensis* Henderson 1931.

Type locality: Santa Barbara, California. Distribution: Kodiak Island, Alaska, to Bahia Magdalena, Baja California Sur; middle intertidal zone to 80 m; common.

Superfamily Myoidea

Family Myidae

Cryptomya californica (Conrad, 1837). California softshell.

Sphaenia californica Conrad 1837; *Cryptomya ovalis* Conrad 1857; *Mya tenuis* R. A. Philippi 1887, non Schröter 1802; *Cryptomya oregonensis* Dall 1909; *C. quadrata* R. Arnold 1910; *C. washingtoniana* Weaver, 1912; *C. magna* Dall 1921; *C. busoensis* Yokoyama 1922; *Mya inopia* Hanna 1924, *nomen novum pro Mya ovalis* (Conrad), non Pulteney 1799; *Macoma kerica* Hendrickson 1928; *Cryptomya kamtschatica* Il'ina 1963.

Type locality: Near Santa Barbara, California. Distribution: MacLeod Harbor, Montague Island, Alaska; Gulf of California south to Bayovar, Peru; Hokkaido to Honshu, Japan; intertidal zone to 80 m; common.

Mya arenaria Linnaeus, 1758. Softshell.

?*Mya declivis* Pennant 1777; *M. communis* Megerle von

Mühlfeld 1811; *M. lata* J. Sowerby 1815; *M. acuta* Say 1822; *M. mercenaria* Say 1822; *M. subovata* S. Woodward 1833; *M. subtruncata* S. Woodward 1833; *M. alba* Agassiz 1839; *M. corpulenta* Conrad 1845; *M. japonica* Jay 1857; *Spenia ovoidea* Carpenter 1864; *S. ovalis* Carpenter 1864, *nomen nullum; Mya hemphilli* Newcomb 1874; *M. elongata* Locard 1886; *M. arenaria alaskana* Dall, F. Baker 1910, *nomen nudum; M. oonogai* Makiyama 1935; *M. arenaria corbuloides* Comfort 1938.

Type locality: Northeastern Europe. Distribution: Circumboreal; from Icy Cape, Alaska, throughout the southern Bering Sea to the Yukon Delta, south to Elkhorn Slough, California, with several records of juvenile specimens collected off San Diego; east to Korea, the Kuril Islands, and northern Japan; North Atlantic from Iceland to Spain and the Black Sea; east coast of North America from Newfoundland to Virginia; intertidal zone; common.

Mya baxteri Coan and Scott, 1997. Deep softshell.

Mya intermedia Dall 1898, non J. Sowerby 1814, non J. de C. Sowerby 1823; *M. baxteri* Coan and Scott 1997, *nomen novum pro Mya intermedia* Dall, non J. Sowerby; *M. profundior* U. S. Grant and Gale, *auctt.*, non U. S. Grant and Gale 1931; *M. elegans* Eichwald, *auctt.*, non Eichwald 1871.

Type locality: Monterey, California. Distribution: Near Nome, Bering Sea, the Pribilof Islands, to Cold Bay, Alaska; California; and west to Kamchatka; 10–100 m.

Mya pseudoarenaria Schlesch, 1931. False softshell.

Mya (Mya) pseudoarenaria Schlesch 1931; *M. truncata ovata* Jensen 1900, non *M. ovata* Forskål 1775; *M. priapus* Tilesius, *auctt.*, non Tilesius 1822; ?*M. uzenensis* Nomura and Zinbo 1937.

Type locality: Not traced. Distribution: Point Barrow, Alaska, into and throughout the Bering Sea south to Cook Inlet, Alaska, south to northern Japan, and in the Atlantic from northern Norway to Iceland and western Greenland; 2–50 m; common.

Mya truncata Linnaeus, 1758. Truncate softshell.

Mya ovalis Turton, 1822, non Pulteney 1799; *Sphenia swainsoni* Turton 1822; *Mya pullus* J. de C. Sowerby 1826; ?*Corbula gibbosa* Broderip and G. B. Sowerby I 1829; *Mya truncata uddevallensis* Forbes 1846; *M. praecisa* Gould 1850; *M. truncata abbreviata* Jeffreys 1865.

Type locality: Europe. Distribution: Circumboreal and Circum-Arctic; Beaufort Sea west to Point Barrow, Alaska, south to Hood Canal and Neah Bay, Washington, and in the western Pacific south to northern Japan; intertidal zone to 100 m; common.

Superfamily Hiatelloidea

Family Hiatellidae

Cyrtodaria kurriana Dunker, 1861. Kurr propeller-clam.

Cyrtodaria camdenensis Dall 1920.

Type locality: West Coast of Greenland. Distribution: Arctic Ocean from Baffin Island to Point Barrow, Alaska, Bering Strait, south in the Bering Sea to St. Lawrence Island and Norton Sound, Alaska, and west to Cape Navarin, Siberia; 10–85 m.

Hiatella arctica (Linnaeus, 1767). Arctic hiatella.

Mya arctica Linnaeus 1767; *Solen minutus* Linnaeus 1767; *Mytilus rugosus* Linnaeus 1767; *Mytilus pholadis* Linnaeus 1771; *Mya byssifera* Fabricius 1780; *Hiatella monoperta* Bosc 1801, *ex* Daudin MS; *H. biaperta* Bose 1801, *ex* Daudin MS; *Saxicava striata* Fleuriau de Bellevue 1802; *Mytilus praecisus* Montagu 1803; *Mya purpurea* Montagu 1808; *Didonta bicarinata* Schumacher 1817; *Saxicava gallicana* Lamarck 1818; *S. distorta* Say 1822; *Hiatella oblonga* Turton 1822; *Saxicava solida* G. B. Sowerby I 1834; *S. purpurascens* G. B. Sowerby I 1834; *S. tenuis* G. B. Sowerby I 1834; *S. groenlandica* Potiez and Michaud 1844; *S. clava* Valenciennes 1846; *S. rubra* Deshayes 1848; *S. ungana* Grewingk 1850; *Sphenia bilirata* Gabb 1861; *S. pholadis gastrochaenoidea* Carpenter 1864; *S. initialis* de Folin 1867; *S. acuta* de Folin 1867; *Saxicava insita* Conrad 1869; *S. orientalis* Yokoyama 1920; *Petricola awana* Yoloyama 1924.

Type locality: Norway. Distribution: Cosmopolitan (possibly spread in part by human activity); Point Barrow, Alaska, throughout the Bering Sea, west to Japan, and along the west American coast to Chile; intertidal zone to 1190 m; common.

Remarks: Recent molecular work suggests that this species consists of multiple separately evolving lineages (Laakkonen et al., 2015).

Panomya ampla Dall, 1898. Ample roughmya.

?*Panomya (ampla?) chrysis* Dall 1909.

Type locality: Aleutian Islands. Distribution: Point Barrow, Alaska, throughout the Bering Sea, south to Puget Sound, Washington, and the Sea of Okhotsk; 10–150 m.

Panomya norvegica (Spengler, 1793). Arctic roughmya.

Mya norvegica Spengler 1793; *Glycimeris arctica* Lamarck 1818; *Panopaea bivonae* R. A. Philippi 1836; *P. spengleri* Valenciennes 1843; *P. middendorfii* A. Adams 1855; *Panomya arctica turgida* Dall 1916, *nomen nudum; P. trapezoidis* Strauch 1972.

Type locality: Norway. Distribution: Circumpolar; Point Barrow, throughout the Bering Sea; south to Tillamook, Oregon, and occasionally as far south as Santa Catalina Island, California; south to Chesapeake Bay, Britain, and northern Japan; 20–640 m.

Panomya priapus (Tilesius, 1822). Bering roughmya.

Mya priapus Tilesius 1822, *ex* Steller MS; *Panomya beringiana* Dall 1916, *nomen nudum; P. gigantea* Kanno 1957.

Type locality: Not traced. Distribution: Point Barrow, Alaska, throughout the Bering Sea south to Kuskokwin Bay, probably southeast to Cook Inlet, Alaska, and west to the Sea of Okhotsk; 10–50 m.

Panopea generosa (Gould, 1850). Pacific geoduck.

Panopaea japonica A. Adams 1850; *Panopea generosa solida* Dall 1898; *Panopea generosa taeniata* Dall 1918.

Type locality: Puget Sound, Washington. Distribution: Eastern North Pacific from Kodiak Island, Alaska, to Baja California, Mexico; western North Pacific population from southern Sakhalin Island and the Kuril Islands to Kyushu, southern Japan; low intertidal zone to 100 m; common; commercially harvested.

Remarks: Vadopalas et al. (2010) resurrected this species from the synonymy of *P. abrupta*.

Superfamily Pholadoidea

Family Pholadidae

Netastoma japonicum (Yokoyama, 1920). Unequal rostrate-piddock.

Jouannetia japonica Yokoyama 1920.

Type locality: Japan. Distribution: Kachemak Bay, Gulf of Alaska; mouth of Watun River, Graham Island, Queen Charlotte Islands, British Columbia, to Cape Flattery, Washington; northern Japan; low intertidal zone to 276 m.

Penitella hopkinsi G. L. Kennedy and Armentrout, 1989. Chimney piddock.

Type locality: Gulf of Alaska. Distribution: Gulf of Alaska from Chirikof Island east to Wingham Island, Alaska; low intertidal zone.

Penitella penita (Conrad, 1837). Flat-tip piddock.

Pholas penita Conrad 1837; *Pholadidea penita* (Conrad 1837); *P. concamerata* Deshayes 1839; *Penitella speloea* Conrad 1855; *P. curvata* Tryon 1865; *Pholadidea penita sagitta* Dall 1916, *ex* Stearns MS, *nomen nudum; ex* Stearns MS.

Type locality: Near San Diego, California. Distribution: Prince William Sound, Alaska, to Punta Pequeña, Baja California Sur; mid-intertidal zone to 10 m.

Xylophaga washingtona Bartsch, 1921. Washington woodeater.

Xylophaga californica Bartsch 1921.

Type locality: San Juan Island, Washington. Distribution: Norton Sound, Bering Sea, Alaska, to Oceanside, California; 75–2300 m.

Zirfaea pilsbryi Lowe, 1931. Pilsbry piddock.

Zirfaea gabbi femii Adegoke 1967, *nomen nudum; Pholas crispate* Linnaeus, *auctt.*, non Linnaeus 1776; *Zirfaea gabbii* (Tryon), *auctt.*, non Tryon 1863).

Type locality: Bolinas, California. Distribution: Point Lay, Arctic coast of Alaska, the Chukchi Sea, to Bahia Magdalena, Baja California Sur; low intertidal zone to 125 m.

Family Teredinidae

Bankia setacea (Tryon, 1863). Feathery shipworm.

Xylotra setacea Tryon 1863; *Bankia sibirica* Roch 1934; *B. (Neobankia) osumiensis* Mawatari and Kitamura 1960.

Type locality: San Francisco Bay, California. Distribution: Throughout the North Pacific; Bering Sea, Alaska, to San Diego, California, and from the Kuril Islands to the Sea of Japan; mid-intertidal zone to 90 m; common.

Subclass Anomalodesmata

Superfamily Pandoroidea

Family Pandoridae

Pandora (Pandorella) bilirata Conrad, 1855. Bilirate pandora.

Pandora (Kennerlia) bicarinata Carpenter 1864; *Pandora granulata* Dall 1915; *P. (Kenerlyia) pseudobilirata* Nomura and Hatai 1940.

Type locality: California. Distribution: Kukak Bay and Prince William Sound, Alaska, south to the Gulf of California; western North Pacific from the Kuril Islands to Honshu, Japan; subtidal zone to 250 m.

Pandora (Pandorella) filosa (Carpenter, 1864). Threaded pandora.

Kennerlia filosa Carpenter 1864.

Type locality: Puget Sound, Washington. Distribution: Nunivak Island and Galena Bay, Alaska, to Ensenada, Baja California; 20–300 m.

Pandora (Pandorella) glacialis Leach, 1819. Glacial pandora.

Kennerlyia glacialis eutaenia Dall 1915.

Type locality: Spitsbergen. Distribution: Circum-Arctic and circumboreal; Beaufort Sea, Alaska, to Puget Sound, Washington; North Atlantic from Greenland to Massachusetts; western Pacific from the Kuril Islands to northern Japan; 5–350 m.

Pandora (Pandorella) wardiana A. Adams, 1860. Giant pandora.

Pandora (Kennerlyia) grandis Dall 1877; *Kennerlyia forresterensis* Willett 1918; *Pandora wajampolkensis* Slodkevich 1938; *P. (Kennerleyia) japanensis* Nomura and Hatai 1940; *P. wardiana nomurai* Otuka 1943.

Type locality: Coast of Manchuria. Distribution: Point Barrow, Pribilof Islands, southern Bering Sea, to Cook Inlet, Alaska, and south to Cape Flattery, Washington; western North Pacific from Sakhalin Island to Hokkaido, northern Japan, and Yellow Sea off Manchuria; 40–200 m.

Family Lyonsiidae

Entodesma navicula (A. Adams and Reeve, 1850). Rock entodesma.

Lyonsia navicula A. Adams and Reeve 1850; *L. saxicola* W. Baird 1863; *Entodesma s. cylindracea* Carpenter 1864; *E. scammoni* Dall 1871; *E. truncatissima* Pilsbry 1895; *E. (Agriodesma) naviculoides* Yokoyama 1922.

Type locality: Not traced. Distribution: Throughout the southern Bering Sea; from Atka Island, Aleutian Islands, and eastward to Cordova, Alaska, south to Point Loma, California; west to the Kuril Islands and northern Japan; mid-intertidal zone to 60 m.

Lyonsia arenosa (Möller, 1842). Sandy lyonsia.

Pandorina arenosa Möller 1842; *Osteodesma aeruginosa* Mighels 1844; *Lyonsia gibbosa* A. Hancock 1846; *L. (Pandorina) flabellata* Gould 1861; *L. ventricosa* Gould 1861; *Pandorina becki* Leche 1878, *ex* Möller MS; *L. arenosa sibirica* Leche 1883; *L. a. tarasovi* Scarlato 1981.

Type locality: Atlantic. Distribution: Circum-Arctic and circumboreal; along the Arctic coast to the Beaufort Sea, throughout the Bering Sea, south to Kodiak Island and west to Novaya Zemlya, Siberia, and the Sea of Okhotsk; Atlantic south to Nova Scotia; 15–100 m.

Lyonsia bracteata (Gould, 1850). Scaly lyonsia.

Osteodesma bracteata Gould 1850; *Lyonsia pugetensis* Dall 1913.

Type locality: Puget Sound, Washington. Distribution: Chignik Bay, Alaska, to Cape Flattery, Washington; 50–280 m.

Lyonsia californica Conrad, 1837. California lyonsia.

Osteodesma nitidum Gould 1853; *Lyonsia gouldii* Dall 1915; *L. californica haroldi* Dall 1915; *L. c. nesiotes* Dall 1915; *Mya striata* Montagu, *auctt.*, non Montagu 1815.

Type locality: California. Distribution: Kodiak Island and Prince William Sound, Alaska, throughout the Gulf of California, and south to Acapulco, Guerrero, Mexico; subtidal zone to 100 m.

Mytilimeria nuttalli Conrad, 1837. Bladderclam.

Type locality: California. Distribution: Sitka, Alaska, to Bahia San Quintin, Baja California; low intertidal zone to 66 m; commensal in solitary or colonial ascidians and sponges.

Superfamily Thracioidea

Family Thraciidae

Lampeia adamsi (N. L. MacGinitie, 1959). Pillar thraciid.

Thracia (Lampeia) adamsi N. L. MacGinitie 1959.

Type locality: Point Barrow, Alaska. Distribution: Point Barrow into the northwestern Bering Sea, Alaska, west to Cape Chaplino, Chukchi Peninsula; 10–41 m.

Thracia (Cetothrax) condoni Dall, 1909. Smooth thraciid.

Type locality: Near Eugene, Oregon, in Miocene rocks of Smith's quarry. Distribution: Kodiak Island, throughout the Gulf of Alaska as far north as Kasitsna Bay, Cook Inlet, Alaska, and south to Clover Point, Victoria, British Columbia; 16–81 m.

Thracia (Crassithracia) septentrionalis Jeffreys, 1872. Northern thraciid.

Thracia truncata Mighels and C. B. Adams 1842, non *Anatina truncata* Turton 1822; *T. septentrionalis* Jeffreys 1872, *nomen novum pro T. truncata* Michels and C. B. Adams, non (Turton); *Thracia crassa* Becher 1886; *Macoma truncaria* Dall 1916, *nomen nudum; T. seminuda* Scarlato 1981.

Type locality: Europe. Distribution: Circum-Arctic; Arctic coast of Alaska; Bering Sea south to Popof Strait, Shumagin Islands; Iceland; Greenland; Rhode Island; Sea of Japan; 11–69 m.

Thracia (Homoeodesma) challisiana Dall, 1915. Pustulose thraciid.

Type locality: San Juan Island, Washington. Distribution: Kasitsna Bay, Cook Inlet, Alaska, to the San Juan Islands, Washington; Redondo, California, to Isla Guadalupe, Baja California; 30–230 m.

Thracia (Homoeodesma) trapezoides Conrad, 1849. Trapezoidal thraciid.

?*T. ventricosa* Conrad, F. B. Meek 1864, *nomen nudum*, non R. A. Philippi 1844; ?*T. jacalitosana* R. Arnold 1910; *T. kamayasikensis* Hatai 1940; *T. kurosawaensis* Hayasaka 1957; *T. kanakoffi* Hertlein and Grant 1972.

Type locality: Astoria, Oregon. Distribution: Wide Bay, Alaska; eastern North Pacific in the Gulf of Alaska to Cook Inlet, south to Isla Cedros, Baja California; 11–200 m.

Thracia devexa G. O. Sars, 1878. Sloping thraciid.

Thracia truncata [Brown] *var. devexa* G. O. Sars 1878.

Type locality: Norway. Distribution: Circum-Arctic; Beaufort Sea; Bering Sea from the Navarin Basin south to the Pribilof Islands; isolated populations present in Skidegate Inlet, Queen Charlotte Islands and southeastern Vancouver Island; south to northern Norway, Greenland, northern Canada; 7–348 m.

Thracia myopsis Möller, 1842. Arctic thraciid.

Thracia myopsis Möller 1842, *ex* Beck MS; *T. couthouyi* Stimpson 1851; *T. truncata* T. Brown, *auctt.*, non T. Brown 1844, non (*auctt.*); *T.* var. *typical* Sars 1878; *T. beringi* Cooperi 1894, *ex* Dall MS, *nomen nudum*

Type locality: Greenland. Distribution: Circum-Arctic and circumboreal; Beaufort Sea, throughout the Bering Sea, south to Barkley Sound, Vancouver Island, British Columbia, with sporadic records from further south, including Cordell Bank off San Francisco, Monterey Bay, and off La Jolla, California; south to Norway, Greenland, Iceland, Massachusetts in the Atlantic and Peter the Great Bay, Sea of Japan, in the western Pacific; 50–250 m.

Family Periplomatidae

Periploma (Septentrioploma) aleuticum (Krause, 1885). Aleutian spoonclam.

Anatina aleutica Krause 1885; *Periploma abyssorum* Verrill, in Bush 1893; *P. alaskanum* W. M. Williams 1940; ?*Periploma subfragilis* Scarlato and Kafanov 1988; *Anatina fragilis* Totten, *auctt.*, non Totten 1835.

Type locality: Bering Sea. Distribution: Circumboreal and circum-Arctic; Point Barrow, Alaska, to Prince William Sound and Glacier Bay, Alaska, south to Nova Scotia in the western Atlantic and to the Sea of Okhotsk in the western Pacific; 10–100 m.

Superfamily Cuspidarioidea

Family Cuspidariidae

Austroneaera semipellucida (Kuroda, 1948). North Pacific austroneaera.

Cuspidaria (Plectodon?) semipellucida Kuroda 1948; *C. (Pseudoneaera) iridella* Kuroda 1948.

Type locality: Japan. Distribution: Baranof Island, Alaska, to Tillamook, Oregon, also in Japan; 155–823 m.

Cardiomya behringensis (Leche, 1883). Bering cardiomya.

Neaera behringensis Leche 1883; *Cardiomya robiginosa* Okutani and Sakurai 1964; *C. behringensis okutanii* Scarlato 1972.

Type locality: ?Bering Sea. Distribution: Throughout the Bering Sea, south to the Pribilof Islands, east to Prince William Sound, Alaska, and west to Kamchatka, the Kuril Islands, and northern Japan; 20–80 m.

Cardiomya pectinata (Carpenter, 1864). Pectinate cardiomya.

Neaera pectinata Carpenter 1864; *Cuspidaria (Cardiomya) californica* Dall 1886; *Cardiomya oldroydi* Dall, in Oldroyd 1924; *C. isolirata* F. R. Bernard 1969.

Type locality: Puget Sound, Washington. Distribution: Prince William Sound, Alaska, to Monterey Bay, California, to Isla la Plata, Ecuador, and the Galapagos Islands; 5–1000 m.

Cardiomya planetica (Dall, 1908). Fine-ribbed cardiomya.

Cuspidaria (Cardiomya) planetica Dall 1908; *C. (Cardiomya) pseustes* Dall 1908.

Type locality: Puget Sound, Washington. Distribution: Southeast of the Pribilof Islands, west to Unalaska Island, Aleutian Islands, east to Kodiak Island, Alaska, and south to the Gulf of Panama, and to the east of the Galapagos Islands, and Japan; 25–3000 m.

Cuspidaria apodema Dall, 1916. Alaskan dipperclam.

Type locality: Sitka Bay, Alaska. Distribution: Sitka, Alaska, to Cascadia Abyssal Plain, Oregon; 1000–2900 m.

Cuspidaria glacialis (G. O. Sars, 1878). Glacial dipperclam.

Neaera glacialis G. O. Sars 1878; *Cuspidaria subglacialis* Dall 1913; *C. trosaetes* Dall 1925.

Type locality: Norway. Distribution: Circum-Arctic and circumboreal; Beaufort Sea, throughout the Bering Sea, to northern Baja California, and to New Jersey and Japan; 23–3020 m.

Myonera garretti Dall, 1908. One-ribbed myonera.

Myonera mexicana Knudsen 1970.

Type locality: U. S. S. *Albatross*, station 3380, southeast from Malpelo Island, Gulf of Panama, in 899 fathoms. Distribution: Central Bering Sea, Alaska; Cascadia Abyssal Plain, Washington, to Isla Malpelo, Colombia; 2156–4200 m.

Rhinoclama filatovae (F. R. Bernard, 1979). Filatova dipperclam.

Cuspidaria filatovae F. R. Bernard 1979; *C. (Rhinoclama) marmorea* F. R. Bernard 1989.

Type locality: West of Newport, Oregon. Distribution: South of Attu Island, Aleutian Islands; Cape Flattery, Washington, and Newport, Oregon, to Patton Escarpment, California; 3500–5140 m.

Superfamily Verticordioidea

Family Verticordiidae

Dallicordia alaskana (Dall, 1895). Alaskan verticordid.

Lyonsiella alaskana Dall 1895.

Type locality: Southwest of Sitka, Alaska. Distribution: Sitka, Alaska, to Santa Catalina Island, California; 800–3570 m.

Halicardia perplicata (Dall, 1890). Heavy-ribbed verticordid.

Verticordia perplicata Dall 1890.

Type locality: Near the Galapagos Islands. Distribution: Widely distributed in the deep Pacific Ocean; eastern Pacific, from the Gulf of Alaska, the Queen Charlotte Islands, British Columbia, and Cape Flattery, Washington, to the Galapagos Islands; 1000–1500 m.

Policordia jeffreysi (Friele, 1879). Arctic verticordid.

Lyonsiella jeffreysi Friele 1879; *L. uschakovi* Gorbunov 1946.

Type locality: Spitsbergen. Distribution: Throughout the Arctic; Beaufort Sea; 711–2377 m.

Policordia pilula (Pelseneer, 1911). Hairy verticordid.

Lyonsiella pilula Pelseneer 1911.

Type locality: Not traced. Distribution: Celebes Sea, southeastern Pacific; Gulf of Alaska; Tufts Abyssal Plain, Oregon; 1230–2980 m.

Policordia subrotundata V. L. Ivanova, 1977. Rotund verticordid.

Type locality: South of the Alaska Peninsula. Distribution: Known only from type locality; 1050 m (single specimen); rare.

Superfamily Poromyoidea

Family Poromyidae

Cetomya malespinae (Ridewood, 1903). Malaspina poromya.

Poromya malespinae Ridewood 1903, *ex* Dall MS; *Cetoconcha malespinae* Dall 1916, *nomen nudum; C. malaspinae, auctt., nomen nullum.*

Type locality: Southwest of Sitka Bay, Alaska. Distribution: Sitka, Alaska, to Cascadia Abyssal Plain, Oregon; 2100–2900 m.

Dermatomya tenuiconcha (Dall, 1913). Smooth poromya.

Poromya oregonensis Ridewood 1903, *nomen dubium; P. (Dermatomya) tenuiconcha* Dall 1913; *D. leonina* Dall 1916, *nomen nudum; D. beringiana* Dall 1916, *nomen nudum; P. (D.) soyoae* Habe 1952, *nomen nudum; D. tenuiconcha soyoae* Habe 1952; *D. tenuiconcha sagamiensis* Okutani 1962; *P. (D.) canadensis* F. R. Bernard 1969; *D. kurilensis* Scarlato 1981.

Type locality: Monterey Bay, California. Distribution: Bowers Bank, Aleutian Islands, to La Jolla, California; western Pacific south to Honshu and the Sea of Japan; 293–2200 m.

Class Scaphopoda—The Tusk Shells

The scaphopods (tusk shells) are a minor group of mollusks and all are marine, infaunal burrowers, globally distributed in the world's oceans from intertidal to abyssal depths. There are about 517 extant scaphopod species worldwide (Steiner and Kabat, 2004), with approximately 10 species occurring in Alaskan waters (Table 1). The higher classification follows Reynolds and Steiner (2008). The major publication used to compile this list of scaphopods was Steiner and Kabat (2004).

Order Dentaliida

Family Dentaliidae

Antalis pretiosa (G. B. Sowerby II, 1860). Indian-money or wampum tuskshell.

Dentalium indianorum Carpenter 1864; *Antalis columbiana* Clessin 1896; *A. pretiosa;* Pilsbry and Sharp 1897; *A. denseliratum* Pilsbry and Sharp 1898.

Type locality: California. Distribution: Alaska south to Baja California; 2–152 m.

?***Dentalium agassizi*** Pilsbry and Sharp, 1897.

Type locality: Gulf of Panama. Distribution: Eastern Pacific: Southeast Alaska (?) to Panama; 757–2322 m.

Remarks: This species has been reported from Southeast Alaska (Austin, 1985; Baxter, 1987) but Abbott (1974) and Steiner and Kabat (2004) report California as the northern limit of this species.

Graptacme semistriata (Turton, 1819). Semi-polished tuskshell.

Dentalium semistriatum Turton 1819; *Dentalium semipolitum* Broderip and G. B. Sowerby I 1829; *Dentalium semistriolatum* Guilding 1834; *Dentalium translucidum* Chenu 1843; *Dentalium hyalinum* Philippi 1846; *Dentalium liratum* Carpenter 1857; *Dentalium lirulatum* Mörch 1861; *Dentalium sericatum* Dall 1881; *Dentalium hannai* Baker 1925.

Type locality: Near the Pigeon-House, Dublin Bay, Ireland [in error (Steiner and Kabat, 2004)]. Distribution: Western Atlantic, Caribbean (Bermuda to Brazil); eastern Pacific (southern Alaska to Costa Rica); 3–164 m.

Remarks: Since the origin of this species cannot be determined, Warén (1983) regarded it as a *nomen dubium.* Baxter (1987) collected this species alive at Cook Inlet, Alaska. Records of this species from the Caribbean and the eastern Pacific may represent cryptic sibling species (Steiner and Kabat, 2004).

Family Rhabdidae

Rhabdus dalli (Pilsbry and Sharp, 1897).

Dentalium dalli Pilsbry and Sharp 1897.

Type locality: Santa Barbara Channel, north of Santa Rosa Island, California. Distribution: Bering Sea to Chile; 360–1205 m.

Remarks: *Rhabdus dallia* may be a junior synonym of *Rhabdus rectius,* according to Shimek (1998).

Rhabdus rectius (Carpenter, 1864). Straight tuskshell.

Dentalium rectius Carpenter 1864; *Rhabdus watsoni* Pilsbry and Sharp 1897.

Type locality: Puget Sound, Washington. Distribution: Alaska to California; 91–1794 m.

Order Gadilida

Family Entalinidae

Costentalina pacifica Chistikov, 1982.

Type locality: Aleutian Trench. Distribution: Eastern North Pacific (Alaska); Indo-Pacific (Micronesia and Tasman Sea); 3253–4916 m.

Family Gadilidae

Gadila aberrans (Whiteaves, 1887). Aberrant toothshell.

Cadulus aberrans Whiteaves 1887; *C. hepburni* Dall 1897;

C. fusiformis Pilsbry and Sharpe 1898; *Gadila aberrans* Pilsbry and Sharpe 1898; *Cadulus nitentior* Arnold 1903.

Type locality: Forward Inlet, Quatsino Sound, northwestern coast of Vancouver Island, British Columbia. Distribution: Alaska to southern California; 7–365 m.

Gadila tolmiei (Dall, 1897).

Cadulus tolmiei Dall 1897.

Type locality: Near Victoria, Vancouver Island, British Columbia. Distribution: Southern Alaska to Baja California; 80–1000 m.

?***Siphonodentalium lobatum*** (Sowerby, 1860).

Dentalium vitreum Sars 1851, non Gmelin 1791; *Dentalium lobatum* Sowerby 1860; *Siphonodentalium exvitreum* Sacco 1897.

Type locality: Unknown. Distribution: Arctic Ocean south to North Carolina; southern Ireland; Portugal; Beaufort Sea (?); 27–3316 m.

Remarks: Steiner and Kabat (2004) reported this species only from the eastern North Atlantic; Abbott (1974) reported it from the eastern and western North Atlantic; and Baxter (1987) reported it from the Beaufort Sea.

Family Pulsellidae

Pulsellum salishorum Marshall, 1980. Salish toothshell.

Type locality: East Sound, Orcas Island, San Juan Islands, Puget Sound, Washington. Distribution: Southern Alaska to Washington; 3–91 m.

Class Cephalopoda—The Squids, Cuttlefish, and Octopuses

The cephalopods are an exclusively marine group including the squids, cuttlefish, and octopuses. They inhabit a variety of marine ecosystems, including estuarine, benthic, pelagic, and the deep ocean. Because of their abundance, they are economically important in many of the large fishing industries of Europe, Asia, Australia, New Zealand, and the Americas. It has been estimated that in the United States alone, 2.7–3.6 million metric tons of squid, worth US $7 billion, are harvested annually (California Department of Fish and Game, 2003).

Squid represent a large percentage of the biomass in the ocean and are important in marine food webs, where they play significant roles as predators as well as prey for other squids, fishes, seabirds, and marine mammals (Boyle and Boletzky, 1996; Clarke, 1996; Croxall and Prince, 1996; Norbert and Klages, 1996). About 800 species of cephalopods are extant worldwide (The Cephalopod Page: http://www.thecephalopodpage.org/), with approximately 33 species occurring in Alaskan waters (Table 1). The Gonatidae is the most species-rich family in the North Pacific and has the greatest biomass (Nesis, 1997). All but three of the 19 gonatid species are endemic to the North Pacific or Bering Sea (Jorgensen, 2007), with 12 occurring in Alaskan waters. Jorgensen (2007, 2009) was the main source for compiling this list of Alaskan cephalopods.

Superorder Decapodiformes

Order Sepioidea

Family Sepiolidae

Rossia pacifica Berry, 1911. North Pacific bobtail squid.

?*Rossia* sp.; Berry 1912; *Rossia borealis* Sasaki 1913.

Type locality: Near Yes Bay, Behm Canal, Alexander Archipelago, Alaska. Distribution: Boreal; wide-spread in the North Pacific from Korea, Japan, and the Sea of Japan north through the Sea of Okhotsk, Kuril Islands and southeastern Kamchatka to the Aleutian Islands, Bering Sea, Gulf of Alaska south to southern California;10–600 m; common.

Order Myopsida

Family Loliginidae

Doryteuthis opalescens (Berry, 1911). Opalescent inshore squid.

Loligo stearnsii Hemphill 1892, *nomen nudum; Ommastrephes tryoni* Keep 1904; *Loligo pealii* non Le Sueur; Jenkins and Carlson 1903; *Loligo opalescens* Berry 1911.

Type locality: Puget Sound, Washington. Distribution: Gulf of Alaska to Baja California, Mexico; surface to 500 m.

Order Oegopsida

Family Chiroteuthidae

Chiroteuthis calyx Young, 1972.

Type locality: Southern California. Distribution: Aleutian Islands, Gulf of Alaska south to southern California; across the North Pacific to Honshu, Japan; 130 to >1200 m.

Family Cranchiidae

Galiteuthis phyllura Berry, 1911.

Galiteuthis beringiana Sasaki 1920.

Type locality: Monterey Bay, California. Distribution: Bering Sea; Aleutian Islands south to Baja California; northern Japan; >500 m.

Taonius borealis (Nesis, 1972).

Belonella borealis Nesis 1972.

Type locality: North Pacific Ocean (44°07.8′N, 150°26.7′E). Distribution: Bering Sea; Aleutian Islands; Gulf of Alaska south to northern Washington; depth unknown.

Family Gonatidae

Berryteuthis anonychus (Pearcy and Voss, 1963). Minimal armhook squid.

Gonatus anonychus Pearcy and Voss 1963.

Type locality: Oregon. Distribution: Bering Sea; Aleutian Islands; Gulf of Alaska south to northern California; surface to 250 m.

Berryteuthis magister (Berry, 1913). Magister armhook squid.

Gonatus magister Berry 1913.

Type locality: Puget Sound, Washington. Distribution: Bering Sea; Alaska Bay; Aleutian and Kuril Islands; south to California; Sea of Okhotsk, Sea of Japan, and northeastern Honshu, Japan; 50–750 m; common and abundant; commercially fished.

Eogonatus tinro (Nesis, 1972).

Gonatus tinro Nesis 1972.

Type locality: Bering Sea (58°22.2′N, 174°55′W). Distribution: Bering Sea; Gulf of Alaska; Aleutian Islands; west to Japan; surface to 750 m.

Gonatopsis borealis Sasaki, 1923. Boreopacific armhook squid.

Type locality: Western North Pacific Ocean, Japan, eastern Hokkaido Island, 15–30 miles off Kushiro. Distribution: Bering Sea; Gulf of Alaska; Aleutian Islands; south to California; 100–1000 m.

Gonatus berryi Naef, 1923. Berry armhook squid.

Type locality: Monterey Bay, California. Distribution: Bering Sea; Gulf of Alaska; Aleutian Islands; south to southern California; west to Japan; surface to 750 m.

?***Gonatus californiensis*** Young, 1972. California armhook squid.

Type locality: Southern California. Distribution: Washington coast to Baja California; depth unknown.

Remarks: This species might occur off southeast Alaska, according to Jorgensen (2009).

Gonatus kamtschaticus (Middendorf, 1849).

Onychoteuthis kamtschatica Middendorff 1849.

Type locality: Kamchatka. Distribution: Gulf of Alaska; western Pacific; epipelagic; rare in the Gulf of Alaska (Jorgensen, 2007).

Gonatus madokai Kubodera and Okutani, 1977. Madoka armhook squid.

Type locality: Western North Pacific Ocean. Distribution: Bering Sea, Gulf of Alaska, Aleutian Islands, south to northern California, west to the Okhotsk Sea; surface to 750 m.

Gonatus middendorffi Kubodera and Okutani, 1981. Middendorff armhook squid.

Type locality: Western North Pacific Ocean. Distribution: Bering Sea, Gulf of Alaska, Aleutian Islands; surface to 1000 m.

Gonatus onyx Young, 1972. Clawed armhook squid.

Type locality: Southern California. Distribution: Western Bering Sea, Gulf of Alaska, west to Aleutian Islands, south to Baja California; Ohkotsk Sea, Japan; surface to 1500 m.

Gonatus pyros Young, 1972. Fiery armhook squid.

Type locality: Southern California. Distribution: Central Bering Sea, Gulf of Alaska west to the Aleutian Islands, south to southern California; surface to 750 m.

Gonatus ursabrunae Jefferts, 1985. Brown bear armhook squid.

Type locality: South of Alaska Peninsula (53°57′N, 157°39′W). Distribution: Gulf of Alaska, west to the Aleutian Islands; Oregon; depth range unknown.

Family Histioteuthidae

Histioteuthis hoylei (Goodrich, 1896). Flowervase jewel squid.

Histiopsis hoylei Goodrich 1896; *Stigmatoteuthis hoylei* (Goodrich 1896); *Calliteuthis reversa* Verrill, Chun 1906; *Calliteuthis ocellata* (Owen), Chun 1910 (in part: only references to *C. ocellata*); *Stigmatoteuthis chuni* Pfeffer 1912; *Stigmatoteuthis dofleini* Pfeffer 1912; *Histioteuthis dofleini* (Pfeffer 1912).

Type locality: Andaman Islands, Indian Ocean. Distribution: Circum-(sub)tropical including Gulf of Alaska, south to southern California, west to the Aleutian Islands and Japan; 500 to >1500 m.

Family Octopoteuthidae

Octopoteuthis deletron Young, 1972.

Type locality: Southern California. Distribution: Gulf of Alaska, south to Baja California; northern Peru; and possibly off eastern Honshu, Japan; 500 to >1500 m.

Family Ommastrephidae

Dosidicus gigas (Orbigny, 1835). Jumbo squid.

Ommastrephes gigas Orbigny 1835; *O. giganteus* Gray 1849; *Dosidicus eschrichti* Steenstrup 1857; *D. steenstrupi* Pfeffer 1884.

Type locality: Chile. Distribution: Southeast Alaska to Tierra del Fuego; surface to 500 m in nearshore to outer continental shelf regions.

Ommastrephes bartramii (Lesueur, 1821). Red flying squid.

Loligo bartramii Lesueur 1821; *Sthenoteuthis bartrami, nomen invalidum.*

Type locality: Unknown. Distribution: Worldwide in subtropical and temperate oceanic waters (including southern Alaska); surface to 1500 m.

Family Onychoteuthidae

Moroteuthis robusta (Verrill, 1876). Robust clubhook squid.

Ommastrephes robusta Verrill 1876; *Lestoteuthis robusta* Verrill 1880; *Ancistroteuthis robusta* Steenstrup 1882.

Type locality: Aleutian Islands. Distribution: Temperate to boreal North Pacific; in the eastern Pacific it extends as far south as southern California; >500 m.

Remarks: Tsuchiya and Okutani (1992) recognize *Moroteuthis* Verrill 1881, as a junior synonym of *Onykia* Lesueur 1821, but this synonymy is currently unresolved and has not been followed in the recent literature (e.g., Sweeney and Roper, 1998; Turgeon et al., 1998; Jorgensen, 2009).

Onychoteuthis borealijaponicus Okada, 1927. Boreal clubhook squid.

Onychoteuthis banksi Okada 1927.

Type locality: Japan. Distribution: North Pacific from the Aleutian Islands to southern Japan and Baja California; surface to 600 m.

Superorder Octopodiformes

Order Octopoda

Suborder Cirrata

Family Opisthoteuthidae

Opisthoteuthis californiana Berry, 1949. Flapjack devilfish.

Type locality: Eureka Bar, California. Distribution: North Pacific from the Bering Sea to the Sea of Okhotsk to off central Honshu in the western North Pacific and to off southern California in the eastern North Pacific; 75–1500 m.

Suborder Incirrata

Family Bolitaenidae

Japetella diaphana Hoyle, 1885.

Octopus brevipes D'Orbigny 1834; *Japetella heathi* Berry 1911.

Type locality: Papua New Guinea. Distribution: Throughout the tropical and subtropical regions of the world's ocean and extends into boreal waters of the North Pacific, from southern California to the Gulf of Alaska, Aleutian Islands, and Bering Sea west to Japan; 200 to >1500 m.

Family Octopodidae

Benthoctopus leioderma (Berry, 1911). Smoothskin octopus.

Polypus leioderma Berry 1911; *Octopus leioderma* Berry 1911; *Benthoctopus hokkaidensis* (Berry 1911).

Type locality: Shelikof Strait, Alaska. Distribution: Sea of Okhotsk; Bering Sea and Kuril Islands through Alaska south to Monterey Bay, California; 90–500 m.

Benthoctopus oregonensis Voss and Pearcy, 1990.

Type locality: Oregon. Distribution: Bering Sea to Oregon; >1000 m

Benthoctopus sibiricus Löyning, 1930.

Type locality: Arctic Ocean (76°N, 146°E). Distribution: Arctic Ocean and northern Bering Sea; 60–140 m.

Enteroctopus dofleini (Wülker, 1910). North Pacific giant octopus.

Octopus punctatus Gabb 1862; *O. hongkongensis* Hoyle 1885; *Polypus dofleini* Wülker 1910; *Octopus dofleini* (Wülker 1910); *Polypus apollyon* Berry 1912; *O. dofleini apollyon* (Berry 1912); *Polypus gilbertianus* Berry 1912; *Paroctopus asper* Akimushkin 1963; *Octopus dofleini martini* Pickford 1964.

Type locality: Japan. Distribution: North Pacific; from Alaska south to northern California and west to Japan; 3–1000 m; common.

Graneledone boreopacifica Nesis, 1982.

Moschites verrucosa non Verrill: Hoyle 1904; *Moschites* sp.: Berry 1917; *Graneledone challengeri* non Berry: Robson 1932 (in part); *Japetella heathi* non Berry: Hanna 1952; *Graneledone* sp.: Avdeev 1982; *Graneledone* sp. A: Voss 1988; *Graneledone pacifica* Voss and Pearcy 1990.

Type locality: North Pacific Ocean (50°04′N, 151°35′W). Distribution: North-central Bering Sea to Russian and Japanese waters; southeast Alaska to southern California; 715–3000 m.

Octopus rubescens Berry, 1953. East Pacific red octopus.

Octopus punctatus Gabb 1862 (in part); *Polypus* sp.: Berry 1911; *P. hongkongensis* non Hoyle: Berry 1911 (in part); *P. apollyon* (Berry 1953): Robson 1929 (in part); *P. apollyon* (Berry 1953): Robson 1929 (in part); *Octopus apollyon* (Berry 1953): McConnaughey 1949.

Type locality: South Coronado Island, Baja California. Distribution: Gulf of Alaska to the mouth of the Gulf of California, Mexico; intertidal zone to 300 m; common.

Sasakiopus salebrosus (Sasaki, 1920).

Polypus salebrosus Sasaki 1920; *Bathypolypus salebrosus* (Sasaki 1920): Robson 1932; *Benthoctopus salebrosus* (Sasaki 1920): Muus 2002; *Sasakiopus salebrosus* Jorgensen et al. 2010.

Type locality: Japan. Distribution: Bering Sea slope to western Aleutian Islands; 200–1200 m; common and abundant.

Order Vampyromorpha

Family Vampyroteuthidae

Vampyroteuthis infernalis Chun, 1903. Vampire squid.
Cirroteuthis macrope Berry 1911; *Vampyroteuthis macrope* (Berry 1911); *Melanoteuthis lucens* Joubin 1912; *Watasella nigra* Sasaki 1920; *Danateuthis schmidti* Joubin 1929; *Hansenotheuthis lucens* Joubin 1929; *Melanoteuthis schmidti* Joubin 1929; *Retroteuthis pacifica* Joubin 1929.
Type locality: Gulf of Guinea. Distribution: Broadly distributed throughout the depths of the world's tropical and temperate oceans, including the southern Bering Sea and Gulf of Alaska; 75–3000 m.

Phylum Arthropoda

Subphylum Chelicerata

Class Pycnogonida—The Sea Spiders

The Pycnogonida are free-living and exclusively marine, found from the poles to the tropics and from the littoral zone to the deepest sea. Over 1300 extant species of pycnogonids are known worldwide (Bamber, 2011), with approximately 60 species occurring in Alaskan waters (Table 1). Recent surveys have shown that many more species await discovery. The higher classification follows the World Pycnogonida Database (Bamber and El Nagar, 2012). A key to identify Arctic species can be found in Vassilenko and Petryashov (2009). Several sources of primary and secondary literature were used to compile the information for the list of pycnogonids: Hedgpeth (1963), Nakamura and Child (1991), Child (1975, 1994, 1995, 1996), and Cadien (1996).

Order Pantopoda

Suborder Eupantopodida

Superfamily Ascorhynchoidea

Family Ammotheidae

Achelia alaskensis (Cole, 1904).
Ammothea alaskensis Cole 1904; *Ammothea nidiuscula* Hall 1913; *Achelia kamtschatica* Losina-Losinsky 1961; *Achelia gurjanovii* Losina-Losinsky 1961.
Type locality: St. Paul Island, Pribilof Islands, Alaska. Distribution: Chukchi and eastern Bering seas and Aleutian Islands to San Francisco, California; Korean and Japanese coasts; Russian Arctic; 0–180 m.

Achelia borealis (Schimkewitsch, 1895).
Ammothea borealis Schimkewitsch 1895; *Ammothea elongata* Hilton 1942; non *Ammothea (Achelia) borealis*: Schimkewitsch 1930 (= *Achelia neotenica* Krapp 1986).
Type locality: Kara Sea. Distribution: North Pacific Rim; Arctic Alaska (Point Barrow and Chukchi Sea) to the Gulf of Alaska; northern Japan; Russian Far East coasts; 24–638 m.

Achelia brevirostris Losina-Losinsky, 1961.
Type locality: Sakhalin Island, Okhotsk Sea. Distribution: Western Aleutian Islands; northern Japan; Sea of Okhotsk; 48–479 m; rare.

?***Achelia chelata*** (Hilton, 1939).
Ammothea chelata Hilton 1939; *Ammothea euchelata* Hedgpeth 1940; *Achelia euchelata* (Hedgpeth 1940).
Type locality: Marine View, California. Distribution: ?Southern Alaska to California; littoral zone.

?***Achelia echinata*** Hodge, 1864.
Ammothea echinata: Bouvier 1923.
Type locality: Durham Coast, UK (North Sea). Distribution: ?Southeast Alaska to California; Hawaii; Mediterranean; North Atlantic; intertidal zone to 109 m.
Remarks: The record of this species in the eastern North Pacific might be referable to *A. spinosa* (R. Bamber[10]).

Achelia latifrons (Cole, 1904).
Ammothea latifrons Cole 1904.
Type locality: St. Paul Island, Pribilof Islands, Alaska. Distribution: Eastern Bering Sea to central California; Korean coast through the western Aleutian Islands; intertidal and shallow subtidal zones.

Achelia megova (Hilton, 1943).
Ammothea megova Hilton 1943.
Type locality: Port Etcher, Gulf of Alaska. Distribution: Amchitka Island, Aleutian Islands and the Gulf of Alaska (Prince William Sound); 22–33 m.

Achelia ovosetosa (Hilton, 1942).
Ammothea ovosetosa Hilton 1942.
Type locality: Constantine Harbor, Amchitka Island, Aleutian Islands. Distribution: Western Aleutian Islands; intertidal zone.

Achelia pribilofensis (Cole, 1904).
Ammothea pribilofensis Cole 1904.
Type locality: St. Paul Island, Pribilof Islands, Alaska. Distribution: Eastern Bering Sea; Aleutian Islands; northern Japan; Kuril Islands; intertidal zone to 50 m.

?***Achelia salebrosa*** Losina-Losinsky, 1961.
Type locality: Okhotsk Sea (Kuril Islands). Distribution: Chukchi Sea; western North Pacific; littoral zone.

Achelia spinosa (Stimpson, 1853).
Ammothea spinosa Stimpson 1853; *Ammothea lavrentii*

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[10] Bamber, R. N. 2012. Personal commun. ARTOO Marine Biology Consultants LLP, Ocean Quay Marina, Belvidere Rd., Southhampton SO14 5QY, United Kingdom.

Losina-Losinsky 1933; *Ammothea litke* Losina-Losinsky 1933; *Ammothea uschakovi* Losina-Losinsky 1933.

Type locality: Bay of Fundy. Distribution: Arctic Alaska (Point Barrow and Chukchi Sea); Bering Sea; Sagami Bay; cold Atlantic coast of North America; littoral zone.

Achelia superba (Loman, 1911).

Ammothea superba Loman 1911.

Type locality: Sagami Bay, Japan. Distribution: Eastern Bering Sea (Pribilof Islands); Aleutian Islands; central Japan north to Sakhalin Island; 7–428 m.

Ascorhynchus japonicus Ives, 1891.

Ascorhynchus agassizzii: Hilton 1942 (non Schimkewitsch 1893).

Type locality: San Diego, California. Distribution: Southern Alaska to California; western North Pacific; littoral zone.

Eurycyde arctica Child, 1995.

Type locality: Amchitka Pass, Aleutian Islands. Distribution: Known only from Amchitka Island; 141–229 m.

Eurycyde depressa Child, 1995.

Type locality: Semisopochnoi Island, eastern Rat Islands, Aleutian Islands. Distribution: Known only from type locality; 121 m; rare.

Eurycyde muricata Child, 1995.

Type locality: Kiska Island, Aleutian Islands. Distribution: Known only from type locality; 137–154 m; rare.

Tanystylum grossifemorum (Hilton, 1942).

Ammothea grossifemora Hilton 1942; *Tanystylum anthomasti* J. W. Hedgpeth 1949.

Type locality: Near Icy Cape, Alaska (Gulf of Alaska). Distribution: North Alaska to Oregon; Japan; 24–66 m.

Superfamily Colossendeidoidea

Family Colossendeidae

Colossendeis angusta G. O. Sars, 1877.

Type locality: Norwegian Sea. Distribution: Semi-cosmopolitan, including the Aleutian Islands and the eastern Bering Sea to Oregon; continental shelf to abyssal depths.

Colossendies colossea Wilson, 1881.

Type locality: Atlantic. Distribution: Cosmopolitan, including the eastern Bering Sea and Aleutian Islands; >3000 m.

Colossendeis dalli Child, 1995.

Type locality: Kiska Island, Aleutian Islands. Distribution: Western Aleutian Islands; 155–567 m.

Colossendeis macerrima Wilson, 1881.

Type locality: Atlantic. Distribution: Cosmopolitan, including the eastern Bering Sea and Aleutian Islands; >3000 m; common.

Colossendeis microsetosa Hilton, 1943.

Colossendeis orientalis Losina-Losinsky 1958.

Type locality: East of the western Aleutian Islands. Distribution: Aleutian Islands; 249–640 m.

Colossendeis peloria Child, 1994.

Type locality: Monterey Canyon, California. Distribution: Western Aleutian Islands and California; 1913–2900 m.

Colossendeis tenera Hilton, 1943.

Type locality: California. Distribution: Western Aleutian Islands; southern Alaska to middle California; 914–3600 m.

Hedgpethia articulata (Loman, 1908).

Colossendeis articulata Loman 1908; *Rhopalorhynchus articulatum* (Loman 1908).

Type locality: Flores Sea. Distribution: Southern Alaska; Banda Sea; deep water.

Hedgpethia brevitarsis (Losina-Losinsky and Turpaeva, 1958).

Colossendeis brevitarsis Losina-Losinsky and Turpaeva 1958; *Rhopalorhynchus brevitarsis*: Stock 1970.

Type locality: Sea of Okhotsk. Distribution: Gulf of Alaska; Japan; 290–300 m.

Hedgpethia californica (Hedgpeth, 1939).

Colossendeis californica Hedgpeth 1939; *Rhopalorhynchus californicum* (Hedgpeth 1939).

Type locality: Southern California. Distribution: Southern Alaska to southern California; western North Pacific; deep water.

Hedgpethia chitinosa (Hilton, 1943).

Colossendeis chitinosa Hilton 1943; *Rhopalorhynchus chitinosum*: Stock 1970; *Hedgpethia californica chitinosa*: Turpaeva 1973.

Type locality: Eastern Bering Sea. Distribution: Eastern Bering Sea; Gulf of Alaska; Aleutian Islands; Japan; Russian Far East seas; 20–3239 m.

Hedgpethia dofleini (Loman, 1911).

Colossendeis dofleini Loman 1911; *Rhopalorhynchus dofleini*: Stock 1958.

Type locality: Misaki, Sagami Bay, Japan. Distribution: Bering Sea; Aleutian Islands; Kyushu, Japan; 20–923 m.

Superfamily Nymphonoidea

Family Callipallenidae

Oropallene polaris Hedgpeth, 1963.

Type locality: Point Barrow, Beaufort Sea, Alaska.

Distribution: West Arctic Ocean; continental shelf depths.

Pseudopallene brevicollis (G. O. Sars, 1891).
Cordylochele brevicollis Sars 1891.
Type locality: Finnmark. Distribution: High boreal Arctic; Chukchi Sea; Canadian Arctic; Barents, Kara, Laptev, and East Siberian seas; 12–650 m.

Pseudopallene circularis (Goodsir, 1842).
Pallene circularis Goodsir 1842; *Pseudopallene intermedia* Krøyer 1844; *Cordylochele microspines* Hilton 1942; *Cordylochele setospines* Hilton 1942; *Pseudopallene setosa* Hilton 1942; *Pseudopallene spinosa* Hilton 1942.
Type locality: Bering Sea. Distribution: Chukchi and eastern Bering seas and Aleutian Islands; Russian Far East; western and eastern Canada; European Arctic; 59–274 m.

Family Nymphonidae

Heteronymphon bioculatum Turpaeva, 1956.
Type locality: Gulf of Alaska. Distribution: Southern Alaska; western North Pacific; >700 m.

Heteronymphon horikoshii Nakamura, 1985.
Type locality: Northern Honshu Island, Japan. Distribution: Aleutian Islands (Unalaska Island, Fox Islands, Aleutian Islands); Japan; 700–2000 m.

Nymphon bergi Losina-Losinsky, 1961.
Type locality: Russian far eastern waters. Distribution: Western Aleutian Islands; Kuril Islands; Okhotsk Sea; 291–388 m.

?***Nymphon brevirostre*** Hodge, 1863.
Nymphon rubrum Hodge 1864; *Nymphon microcollis* Hilton 1942.
Type locality: North Sea, near the Dogger Bank, Seaham, UK. Distribution: ?Arctic Ocean; ?Bering Sea (specific locality unknown); North Atlantic; depth unknown.
Remarks: The Alaska record of this species is of Hilton (1942), which might be erroneous (Bamber[9]).

Nymphon brevitarse Krøyer, 1838.
Type locality: Greenland. Distribution: Circum-Arctic; northern Alaska; Bering Sea; Canadian Arctic; Russian Arctic; Greenland; Spitsbergen; shallow depths to >500 m.

Nymphon duospinum (Hilton, 1942).
Chaetonymphon duospinum Hilton 1942; *Chaetonymphon quadrispinum* Hilton 1942.
Type locality: Kiska Harbor, Alaska. Distribution: Aleutian Islands; 18 m.

Nymphon elongatum Hilton, 1942.
Type locality: Northeast of Dutch Harbor, Unalaska Island, Aleutian Islands. Distribution: Aleutian Islands; 132 m.

?***Nymphon grossipes*** (O. Fabricius, 1780).
Nymphon johnstoni Goodsir 1842; *Nymphon similis* Goodsir 1842; *Nymphon mixtum* Krøyer 1844; *Nymphon glaciale* Lilljeborg 1851; *Nymphon piliferum* Carpenter 1898; *Nymphon turritum* Exline 1926; *Nymphon nigrognathum* Hilton 1942; *Nymphon oculospinum* Hilton 1942; *Nymphon grossipes bathyale* Turpaeva 2005.
Type locality: Norwegian Sea. Distribution: Circum-Arctic; south to Puget Sound in the eastern North Pacific; south to Japan in the western North Pacific; south to Long Island Sound, New York in the western North Atlantic; and equally southern records for northern Europe; 10–1200 m; common.
Remarks: The record of this species in the North Pacific might be erroneous (Bamber[9]).

Nymphon hirsutum Child, 1995.
Type locality: South of Amchitka Island, Aleutian Islands. Distribution: Rat Island group and Andreanof Islands, Aleutian Islands; 205–274 m.

Nymphon longitarse Krøyer, 1844.
Type locality: Norwegian Sea. Distribution: Circumpolar Arctic, south to the Aleutian Islands in the North Pacific; littoral zone.

Nymphon microsetosum Hilton, 1942.
Type locality: North of Amchitka Island, Aleutian Islands. Distribution: Western Aleutian Islands; 11–247 m.

Nymphon molum Hilton, 1942.
Type locality: Pribilof Islands, Bering Sea. Distribution: Eastern Bering Sea; 75 m.

Nymphon pixellae Scott, 1912.
Nymphon solitarium Exline 1936; *Nymphon variatum* Hilton 1942.
Type locality: Departure Bay, Vancouver Island, British Columbia. Distribution: Gulf of Alaska to San Diego, California; 59–196 m.

Nymphon procerum Hoek, 1881.
Type locality: West of Valparaiso, Chile. Distribution: Aleutian Islands to southern Alaska; western North Pacific; Atlantic; deep water.

Nymphon profundum Hilton, 1942.
Nymphon noctum Hilton 1942.
Type locality: Koniuji Island, Atka Island, Aleutian Islands. Distribution: Aleutian Islands and Southeast Alaska; Honshu, Japan; >2000 m.
Remarks: Some authors consider this species a junior subjective synonym of *N. procerum*.

Nymphon sluiteri Hoek, 1901.
Type locality: Barents Sea. Distribution: Circum-

Arctic; Chukchi, Beaufort, Barents, Kara, and Laptev seas; 12–1444 m.

Family Pallenopsidae

?Bathypallenopsis longiseta (Turpaeva, 1957).
Pallenopsis mollissima: Schimkewitsch 1893; *Pallenopsis longiseta* Turpaeva 1957.
Type locality: Okhotsk Sea. Distribution: Bering Sea; Russian Arctic; central and southern California; Gulf of Panama; 1228–4100 m.

Bathypallenopsis oculotuberculosis (Hilton, 1942).
Pallenopsis oculotuberculosis Hilton 1942.
Type locality: Aleutian Islands. Distribution: Aleutian Islands to Oregon; Kamchatka; ?155–2743 m.

Bathypallenopsis tritonis (Hoek, 1883).
Pallenopsis tritonis Hoek 1883; *Pallenopsis pacifica* Hilton 1942; *Pallenopsis stschapovae* Turpaeva 1957.
Type locality: North Atlantic. Distribution: Western Aleutian Islands; Russian North Pacific; North Atlantic; 0–7280 m.

Superfamily Phoxichilidoidea

Family Phoxichilidiidae

Anoplodactylus typhlops G. O. Sars, 1888.
Type locality: Norway. Distribution: Cosmopolitan, including southern Alaska; bathyal to abyssal depths.

Phoxichilidium femoratum (Rathke, 1799). Spiny-thigh sea spider.
Orythia coccineum Johnston 1837; *Phoxichilidium coccineum* (Johnston 1837); *Phoxichilidium maxillare* Stimpson 1853; *Phoxichilidium minor* Wilson 1878; *Phoxichilidium tubulariae* Lebour 1945.
Type locality: Norwegian Sea. Distribution: Arctic Alaska to southern California; North Atlantic; intertidal zone to 20 m.

Phoxichilidium quadradentatum Hilton, 1942.
Type locality: Norton Sound, Alaska. Distribution: Alaska to central California; littoral zone.

Phoxichilidium ungellatum Hedgpeth, 1949.
Type locality: Sea of Japan. Distribution: Western Aleutian Islands; Japanese Islands; 0–479 m.

Pycnosomia strongylocentroti (Losina-Losinsky, 1933).
Pigrogromitus robustus Hilton 1942.
Type locality: Sea of Japan. Distribution: Aleutian Islands; Kuril Islands; Sea of Japan; 75–225 m.

Superfamily Pycnogonoidea

Family Pycnogonidae

Pycnogonum stearnsi Ives, 1883. Stubby oval sea spider.
Type locality: San Diego, California. Distribution: Southern Alaska to southern California; western North Pacific; intertidal zone.

Pycnogonum stylidium Child, 1995.
Type locality: South of Amchitka Island, Aleutian Islands. Distribution: Known only from type locality; 229 m; rare.

Pycnogonum tenue Slater, 1879.
Pycnogonum littorale var. *tenue* Slater 1879.
Type locality: Higashi-Suido, southwestern Japan. Distribution: Western Aleutian Islands; Japan; 7–416 m.

Pycnogonum ungellatum Loman, 1911.
Type locality: Sagami Bay, Japan. Distribution: Western Aleutian Islands; Sea of Okhotsk; Sakhalin Island; Japan; 7–419 m.

Subphylum Crustacea

Class Branchiopoda—The Water Fleas

Branchiopods are mainly small, freshwater crustaceans. Only some members of the suborder Cladocera ("water fleas") are found in marine environments. About 620 species of cladocerans are known worldwide (Forró et al., 2008), with two species occurring in Alaskan marine waters (Table 1). Smirnov and Timms (1983) include a key to all families and diagnoses for most species occurring in the eastern North Pacific.

Subclass Phyllopoda

Order Diplostraca

Suborder Cladocera

Infraorder Onychopoda

Family Podonidae

Evadne nordmanni Lovén, 1836.
Type locality: Eastern North Atlantic. Distribution: All oceans from 40°N to 40°S; epipelagic in coastal waters.

Podon leuckartii G.O. Sars, 1862.
Type locality: Norway. Distribution: Alaska to Oregon; North Atlantic: Barents Sea; Iceland; South Greenland; North Sea; Baltic Sea; epipelagic in shallow inshore waters.

Class Maxillopoda

Subclass Thecostraca

Infraclass Cirripedia—The Barnacles

Cirripedia, commonly known as barnacles, are perhaps most familiar to the layman for the ability of the larvae of some species to attach themselves to boat hulls where they metamorphose into adults and so travel about on vessels from port to port. This "fouling" habit is largely responsible for the nearly cosmopolitan distributions of several species of Cirripedia, especially those adapted to physiologically rigorous environments such as estuaries and harbors. However, most species of Cirripedia are either unable to survive the physiological rigors of such long-distance travel or have substratum requirements for larval settlement that preclude attachment to boat hulls or flotsam.

Certain species of the Cirripedia are epibionts on or obligate symbionts of other animals, such as sponges, corals, whales, sea turtles, crabs, and sea snakes. In Alaska, the whale-inhabiting barnacles are the only known obligate symbionts. In addition, one barnacle subspecies, *Balanus rostratus apertus* Pilsbry 1916, appears to be a facultative symbiont of the hexactinellid cloud sponge, *Aphrocallistes vastus*. Cirriped species that are epibionts on or are symbiotic with highly mobile taxa such as Cetacea and Cheloniidae tend to be widespread or nearly cosmopolitan, reflecting the range of their potential host species. On the other hand, Cirripedia that are epibionts on or are symbionts of sessile organisms, such as sponges and corals, may be relatively restricted in their geographic ranges and depth, depending on the host requirements.

Broadly distributed and short-range endemic species, various reproductive strategies and modes of dispersal, and possession of a durable calcareous shell are qualities that have made Cirripedia useful as "model" organisms in a great number of studies on various aspects of evolution and ecology.

The list of Cirripedia for Alaska includes a few species that are wide-ranging symbionts of mobile hosts, one fouling species with a broad range resulting from the habit of riding on the hulls of boats or drifting flotsam, as well as several species with limited ranges. Most species included in this list are represented by records of vouchered specimens, taken from published literature or museum specimen databases. About 1220 barnacle species are known worldwide (Walters and Johnson, 2007), with approximately 35 species occurring in Alaskan waters (Table 1).

Modern taxonomic and phylogenetic analyses (Newman, 1996; Perez-Losada et al., 2008) consider the Cirripedia to contain three major branches: the Thoracica, the Acrothoracica, and the Rhizocephala. The Acrothoracica, the burrowing barnacles, are nearly exclusively tropical and temperate in distribution. Currently, none are known from Alaska. The Rhizocephala are all parasites on decapod crustacea. Several are known from Alaska. The most speciose group of Cirripedia, the Thoracica, is abundant and diverse in Alaskan waters.

Thoracic Cirripedia is the only group of crustaceans that create and maintain permanent external calcareous shells that continue to grow throughout the life of the adult. The shell offers protection from biotic and physical environmental pressures. This often complex and ornate structure, combined with planktonic larval dispersal in most species, provides thoracic Cirripedia with adaptive tools to invade and persist in widespread, diverse, and physiologically challenging environments.

Historically, barnacle taxonomy has been based on various characters of the calcareous external shells. In addition, the flexible cuticular characters present on the thoracic limbs (cirri) and mouth parts may offer good species-level taxonomic cues. Although a recent morphometric study of shell and flexible cuticular characters by Gomez Daglio (2003) shows that environmental plasticity may confound species-level taxonomy of some species complexes of shore barnacles, these taxonomic characters are generally very reliable. Several good introductions to barnacle taxonomy are available. Perhaps the most celebrated, and very thorough detailed descriptions, are in the monographic works of Charles Darwin (1852, 1854).

Although no single comprehensive modern review of all Cirripedia taxa exists, Newman and Ross (1976) compiled a listing of balanomorph barnacle names, with synonyms and references to taxonomy, ecology, and evolution for each species. Zevina monographed the pedunculate cirripedia of Scalpellomorpha (Zevina, 1981) and Lepadomorpha (Zevina, 1982). An overview of Cirripedia taxa can be found in Newman (1996). Although the Cirripedia section of WoRMS is well underway, it was not a completely current list of species when this checklist of Alaskan invertebrates was compiled.

Superorder Thoracica

Order Sessilia

Suborder Balanomorpha

Superfamily Balanoidea

Family Archaeobalanidae

Chirona evermanni (Pilsbry, 1907).
Balanus evermanni Pilsbry 1907.

Type locality: Junction of Clarence Strait and Behm Canal, Alaska. Distribution: Southern Alaska to the Kuril Islands; Bering Sea; 140–490 m.

Hesperibalanus hesperius (Pilsbry, 1916).

Balanus hesperius Pilsbry 1916; *Solidobalanus hesperius* (Pilsbry 1916).

Type locality: Bering Sea, Alaska (57°18′N, 171°18′W). Distribution: Pacific widespread boreal, including the Chukchi Sea to California; Japan; 3–180 m.

Remarks: Often growing on mollusk shells.

Hesperibalanus laevidomus (Pilsbry, 1916).

Balanus laevidomus Pilsbry 1916.

Type locality: San Juan Islands, Puget Sound, Washington. Distribution: Alaska to San Francisco, California; 8–338 m.

Remarks: Often growing on mollusk shells.

Semibalanus balanoides (Linnaeus, 1767).

Lepas balanoides Linnaeus 1767; *Balanus balanoides* (Linnaeus 1767).

Type locality: Sweden. Distribution: Unalaska, Aleutian Islands, to British Columbia; North Atlantic Arctic to Spain; common on rocks in intertidal zone.

Semibalanus cariosus (Pallas, 1788). Thatched barnacle.

Lepas cariosa Pallas 1788; *Balanus cariosus* (Pallas 1788).

Type locality: Kuril Islands. Distribution: Bering Sea; Japan to central California; common on rocks in intertidal zone.

Solidobalanus engbergi (Pilsbry, 1921).

Balanus engbergi Pilsbry 1921.

Type locality: Olga, Washington. Distribution: Alaska to Oregon; 28–80 m.

Family Balanidae

Amphibalanus improvisus (Darwin, 1854).

Balanus improvisus Darwin 1854.

Type locality: Not specified (various locations in the Atlantic). Distribution: Temperate waters usually, known in Alaska from a single record in Rose Inlet on Dall Island, Southeast Alaska; depth unknown.

Remarks: This is a fouling species, very commonly found in estuaries and harbors, probably introduced to Alaska via boat hulls.

Balanus balanus (Linnaeus, 1758).

Balanus porcatus Darwin 1854.

Type locality: Not specified. Distribution: North Pacific and North Atlantic; intertidal zone to 180 m; common on rocks in intertidal zone.

Balanus crenatus Brugiere, 1789.

Type locality: England. Distribution: North Pacific: Arctic to southern California; North Atlantic: Arctic to Florida; intertidal zone to 250 m; common.

Balanus crenatus curviscutum Pilsbry, 1916.

Type locality: Bristol Bay, Alaska. Distribution: Aleutian Islands to Washington; Japan; depth unknown; common.

Balanus glandula Darwin, 1854.

Type locality: California. Distribution: Aleutian Islands to Baja California, Mexico; introduced to Brazil and South Africa; high intertidal zone; common on rocks in intertidal zone.

Balanus nubilus Darwin, 1854.

Type locality: California. Distribution: Southern Alaska to Baja California; common on rocky subtidal pinnacles.

Remarks: This is a very large barnacle, up to 100+ mm basal diameter.

Balanus rostratus Hoek, 1883.

Type locality: Kobe, Japan. Distribution: Bering Sea; Japan to Washington; intertidal zone to 128 m; common.

Balanus rostratus apertus Pilsbry, 1911.

Type locality: Bering Sea (52°12′N, 179°52′W). Distribution: Bering Sea, Alaska; embedded in the cloud sponge, *Aphrocallistes vastus;* uncommon but not rare.

Remarks: Base not attached to solid substratum, spines often present on exterior of shell wall.

Family Coronulidae

Coronula diadema (Linnaeus, 1767)

Lepas diadema Linnaeus 1767

Type locality: Mediterranean Sea and Indian Ocean. Distribution: Cosmopolitan, including the Bering Sea to southern California.

Remarks: Attached to humpback whales (*Megaptera novaeangliae*).

Coronula reginae Darwin, 1854.

Type locality: Pacific Ocean. Distribution: Cosmopolitan, including the Bering Sea to Oregon.

Remarks: Attached to humpback whales (*Megaptera novaeangliae*).

Cryptolepas rachianecti Dall, 1872.

Type locality: Monterey, California. Distribution: Bering Sea to Baja California, Mexico; common.

Remarks: Attached to gray whales (*Eschrichtius robustus*).

Superfamily Chthamaloidea

Family Chthamalidae

Chthamalus dalli Pilsbry, 1916.

Type locality: Unalaska, Aleutian Islands, and Oyster Bay, Washington. Distribution: Pacific subtropical-boreal, including the Chukchi Sea to California; northern Japan; high intertidal zone; common.

Suborder Lepadomorpha

Family Lepadidae (all pelagic attached to drifting or slowly moving objects)

Conchoderma auritum (Linnaeus, 1758).

Lepas aurita Linnaeus 1758.

Type locality: Northern oceans ("*Habitat in O. Septentrionali*"). Distribution: Cosmopolitan, on rigid surfaces of flotsam or slowly moving objects, including *Coronula* spp.

Remarks: Lives on humpback whales (*Megaptera novaeangliae*). The humpback whale migration to feeding grounds in Alaska brings this species much farther north than those individuals living on flotsam.

Dosima fascicularis Ellis and Solander, 1786. Buoy barnacle.

Lepas fascicularis (Ellis and Solander 1786); *Lepas aurivillii* Nilsson-Cantell 1921.

Type locality: Not specified. Distribution: North Pacific, including Alaska to southern California; North Atlantic; depth unknown; common.

Lepas anatifera Linnaeus, 1758. Common goose barnacle.

Type locality: Not specified. Distribution: Cosmopolitan, including Alaska to South America; attached to flotsam.

Remarks: Most commonly occurring species of *Lepas* in the North Pacific.

Lepas hilli Leach, 1818.

Type locality: Not specified. Distribution: Cosmopolitan, including Alaska to Baja California; attached to flotsam; common.

Lepas pectinata Spengler, 1793.

Type locality: Not specified. Distribution: Normally in warmer seas, may drift northward to Alaskan waters; depth unknown.

Remarks: Pilsbry (1916) noted specimens at the USNM from Unalaska, but rarely seen in Alaskan waters.

Suborder Scalpellomorpha

Family Scalpellidae

Hamatoscalpellum columbianum (Pilsbry, 1909).

Scalpellum columbianum Pilsbry 1909.

Type locality: Lowe Inlet, British Columbia, Canada. Distribution: Southern Alaska to Washington; shallow water.

Hamatoscalpellum vegae (Nilsson-Cantell, 1925).

Scalpellum vegae Nilsson-Cantell 1925.

Type locality: Near Bering Island, 55°24′N, 165°37′E. Distribution: Bering Sea to British Columbia; Aleutian Islands; western North Pacific; type material collected at 127 m.

Litoscalpellum levinsoni (Zevina, 1970).

Type locality: 57°44′N, 167°23′E. Distribution: Bering Sea; southern Kamchatka to Gulf of Alaska; 2880–4070 m.

Remarks: Attached to polychaete tubes.

Litoscalpellum ursum Zevina, 1981.

Type locality: Aleutian Islands. Distribution: Bering Sea; Aleutian Islands to the Gulf of Alaska; commonly attached to hydroid colonies; 105–182 m.

Pollicipes polymerus (Sowerby, 1833). Leaf barnacle.

Type locality: Not specified. Distribution: Southeast Alaska to northern Mexico; very common on rocks in high intertidal zone, often with *Mytilus californianus*.

Remarks: There is a single published record in Pilsbry (1907) from a humpback whale taken in Plover Bay, near Bering Strait.

Verum alascensis (Zevina, 1973).

Type locality: Several localities were listed: 53°46′N, 163°41′W; 56°45.5′N, 136°2′W; and 55°20.8′N, 134°50′W. Distribution: Aleutian Islands and Gulf of Alaska; 900–1370 m.

Superorder Rhizocephala (parasitic barnacles)

Order Kentrogonida

Family Peltogastridae

Briarosaccus callosus Boschma, 1930.

Type locality: Fernandina, Florida, or Cape Fear, North Carolina. Distribution: Bering Sea to British Columbia; Atlantic; Antarctic.

Remarks: Parasitic on decapod crustaceans such as species of *Lithodes, Paralithodes,* and *Paralomis.*

Peltogaster depressus Reinhard, 1944.

Type locality: Karluk, Kodiak Island, Alaska. Distribution: Bering Sea to southern Alaska.

Remarks: Parasitic on *Pagurus capillatus,* type material collected at 57 m.

Peltogaster paguri Rathke, 1842.

Type locality: Norway. Distribution: Bering Sea to Washington; Aleutian Islands; western North Pacific; North Atlantic; depth unknown.

Remarks: Parasitic on *Pagurus* spp.

Peltogastrella gracilis (Boschma, 1927).

Peltogaster socialis Kruger 1912; *Gemosaccus gracilis* Boschma 1927; *Gemosaccus affinis* Boschma 1927; *Peltogaster gracilis* (Boschma 1927); *Peltogaster subterminalis* Reinhard 1944.

Distribution: Bering Sea to southern California; Chile; western North Pacific; depth unknown.

Remarks: Parasitic on species of *Pagurus* and *Discorsopagurus schmitti.*

Family Sacculinidae

?***Loxothylacus panopaei*** (Gissler, 1884).

Sacculina panopaei Gissler 1884.

Type locality: Tampa, Florida. Distribution: ?Alaska; British Columbia; ?California; western Atlantic; Gulf of Mexico; depth unknown.

Remarks: Parasitic on *Lophopanopeus bellus* and other *Panopeus* spp.

Family Clistosaccidae

Clistosaccus paguri Lilljeborg, 1861.

Type locality: Eastern North Atlantic. Distribution: Bering Sea; North Atlantic; depth unknown.

Remarks: Parasitic on various pagurids.

Class Malacostraca

Subclass Eumalacostraca

Superorder Peracarida

Order Amphipoda—The Amphipods

There are about 9896 species of amphipods worldwide (Ahyong et al., 2011). The amphipods are the most diverse and speciose group of peracarid crustaceans in Alaskan waters, with approximately 511 species (Table 1). Identification of all but the more familiar species requires microscopic examination, and dissections of appendages are usually necessary. The higher classification follows Martin and Davis (2001). Barnard and Karaman (1991) is a good source for identifying gammaridean species to family level with the caveat that some families (e.g., Lysianassidae) have undergone extensive revision since then. A key to identify Arctic species of hyperiids and caprellids can be found in Vassilenko and Petryashov (2009).

Perhaps the most important source was the journal Amphipacifica (Journal of Aquatic Systematic Biology. Ottawa, Ontario: Amphipacifica Research Publications), which published taxonomic papers on eastern North Pacific amphipods spanning a ten year period (1994–2004). Other sources of primary and secondary literature that were used to compile the information for the list of amphipods included Shoemaker (1955), Gurjanova (1962), Bousfield (1979, 1982), Barnard (1960, 1964, 1980, 1983), Carey (1978), Conlan and Bousfield (1982a,b, 1983), Dickinson (1982, 1983), Jarrett and Bousfield (1982), and Steele (1982, 1983, 1986).

Suborder Gammaridea

Family Acanthonotozomatidae

Acanthonotozoma inflatum (Krøyer, 1842).

Acanthonotus inflatus Krøyer 1842.

Type locality: Greenland. Distribution: Circumpolar Arctic, including the western Beaufort Sea; 10–300 m.

Acanthonotozoma serratum (O. Fabricius, 1780).

Oniscus serratus Fabricius 1780; *Acanthonotus serratus*: Stimpson 1866; *Vertumnus serratus*: Goës 1876; *Amphithoe serra*: Krøyer 1840.

Type locality: Greenland. Distribution: Circumpolar Arctic, including the western Beaufort Sea; 19–300 m.

Family Ampeliscidae

Ampelisca birulai Brüggen, 1909.

Ampelisca derjugini Bulycheva 1936.

Type locality: Siberian Sea. Distribution: Widely distributed in the Arctic, including the Beaufort and Chukchi seas; depth unknown.

Ampelisca brevisimulata J. L. Barnard, 1954.

Type locality: Church Rock, Santa Catalina Island, California. Distribution: Southeast Alaska (Lynn Canal, near Juneau) to Panama; 20–400 m.

Ampelisca careyi Dickinson, 1982.

Ampelisca macrocephala: Barnard 1954.

Type locality: Swanson Bay, British Columbia. Distribution: Southeast Alaska to Baja California, Mexico; 0–200 m.

Ampelisca cristata Holmes, 1908.

Type locality: Point Loma, San Diego, California. Distribution: Alexander Archipelago (southeast Alaska) to Costa Rica; Gulf of Mexico; intertidal zone to 152 m.

Ampelisca eoa Gurjanova, 1951.

Ampelisca catalinensis J. L. Barnard 1954.

Type locality: Japan. Distribution: Bering Sea to southern California; 230–1833 m.

Ampelisca erythrorhabdota Coyle and Highsmith, 1989.

Type locality: Northern Bering Sea (64°58′N, 169°51′W). Distribution: Chukchi and northern Bering seas; 30–60 m.

Ampelisca eschrichtii Krøyer, 1842.

Ampelisca ingens Bate 1862; *Ampelisca dubia* Boeck 1871; *Ampelisca propinqua* Boeck 1871; *Ampelisca pacificus* Gurjanova 1955.

Type locality: Greenland. Distribution: Circumpolar, including the Chukchi Sea (Feder et al., 2007); littoral to bathyal depths.

Ampelisca furcigera Bulycheva, 1936.

Type locality: Sea of Japan. Distribution: Boreal

Eastern North Pacific; Bering Sea to Baja California; Sea of Okhotsk; Sea of Japan; 60 m to bathyal depths.

Ampelisca lobata Holmes, 1908.
Ampelisca articulata Stout 1913.
Type locality: San Nicolas Island, southern California. Distribution: Southern Alaska to southern California; Galapagos Islands; Caribbean Sea; Gulf of Mexico; intertidal zone to 183 m.

Ampelisca macrocephala Liljeborg, 1852.
Ampelisca latipes Stephensen 1925.
Type locality: Not traced. Distribution: Circumpolar; Arctic Ocean, including the Chukchi Sea (Sirenko and Gagaev, 2007); 10–280 m.

Ampelisca plumosa Holmes, 1908.
Type locality: North Coronado Island (1130–1220 m). Distribution: Southern Alaska to Baja California, Mexico; 813–2667 m.

Ampelisca pugetica Stimpson, 1864.
Ampelisca californica Holmes 1908; *Ampelisca gnathia* J. L. Barnard 1954.
Type locality: Puget Sound, Washington. Distribution: Prince William Sound, Alaska, to Baja California, Mexico; intertidal zone to 225 m.

Ampelisca schellenbergi Shoemaker, 1933.
Type locality: Florida, and off Yucatan. Distribution: Southern Alaska to Caledonia Bay, Panama; Gulf of Mexico; Caribbean Sea; to a depth of 230 m.

Ampelisca unsocalae J. L. Barnard, 1960.
Type locality: California. Distribution: Gulf of Alaska to California; depth unknown.
Remarks: The unpublished record of this species in Alaska was identified by Aaron Baldwin.[11]

Byblis arcticus Just, 1970.
Type locality: North Greenland. Distribution: Western Beaufort Sea; Arctic Russia; Greenland; depth unknown.

Byblis brevirama Dickinson, 1983.
Type locality: St. Lawrence Island, Bering Sea. Distribution: Beaufort Sea, Alaska to British Columbia; 40–150 m.

Byblis crassicornis Metzger, 1875.
Type locality: Jaederen, Norway. Distribution: Alaska (Baldwin[11]); Norway; 182–274 m.

Byblis frigidus Coyle and Highsmith, 1989.
Type locality: Northeastern Bering Sea (64°54′N, 168°15′W). Distribution: Southern Chukchi Sea; northern Bering Sea; type material collected at 40 m.

Byblis gaimardi (Krøyer, 1847).
Ampelisca gaimardii Krøyer 1847.
Type locality: Eastern North Atlantic. Distribution: Arctic, circumpolar; North Pacific; North Atlantic; northern North Sea; southerly limit about latitude 55°N; 5–575 m.

Byblis longispina Dickinson, 1983.
Type locality: Hanning Bay, Montague Island, Gulf of Alaska. Distribution: Gulf of Alaska; 20–25 m.

Byblis pearcyi Dickinson, 1983.
Type locality: St. Lawrence Island, Bering Sea. Distribution: Chukchi and Bering seas south to the Aleutian Islands; 40–50 m.

Byblis robustus Coyle and Highsmith, 1989.
Type locality: Northern Bering Sea (65°22′N, 168°08′W). Distribution: Chukchi and northern Bering seas; 27–56 m.

Byblis teres J. L. Barnard, 1967.
Type locality: Baja California, Mexico. Distribution: Southern Alaska to Baja California; type material was collected at 791–842 m.

Byblis veleronis J. L. Barnard, 1954.
Type locality: Sulphur Bay, Clarion Island, Mexico. Distribution: Southern Alaska to Mexico; type material was collected at 9 m.
Remarks: The unpublished record of this species in Alaska was identified by Aaron Baldwin.[11]

Haploops laevis Hoek, 1882.
Type locality: Western North Atlantic, Labrador. Distribution: Beaufort and Bering seas; Labrador; 30–50 m.

Haploops setosa Boeck, 1871.
Haploops robusta G. O. Sars 1895.
Type locality: Not traced. Distribution: Beaufort Sea, Alaska. Boreal North Atlantic and contiguous seas (Kara Sea, Barents Sea); 50–2800 m.

Haploops sibirica Gurjanova, 1929.
Type locality: Laptev Sea. Distribution: Beaufort Sea, Alaska; Chukchi and Laptev seas; 10–30 m.

Haploops tubicola Liljeborg, 1856.
Haploops carinata Liljeborg 1856 (adult male); *Haploops spinosa* Shoemaker 1931.
Type locality: Kullaberg, Sweden. Distribution: Arctic Ocean, circumpolar; North Pacific south to Santa Maria, California on the U.S. west coast; North Atlantic south to Mediterranean Sea, Adriatic Sea; 10–1200 m.

Family Amphilochidae

Apolochus litoralis (Stout, 1912).
Amphilochus litoralis Stout 1912.
Type locality: Laguna, California. Distribution:

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[11] Baldwin, A. 2012. Personal commun. Alaska Department of Fish and Game, Commercial Fisheries, P.O. Box 115526, Juneau, AK 99811-5526.

Southern Alaska to southern California; intertidal and low water habitats.

Gitana abyssicola G. O. Sars, 1895.
Type locality: Norway. Distribution: Beaufort Sea; North Atlantic; depth unknown.

Gitana rostrata Boeck, 1871.
Type locality: Norway. Distribution: Beaufort Sea; North Atlantic; 180–366 m.

Gitanopsis arctica G. O. Sars, 1895.
Type locality: Norway. Distribution: Beaufort Sea; Iceland; Greenland; Norway; Bay of Fundy; shallow water to a depth of 90 m.

Hourstonius vilordes (J. L. Barnard, 1962).
Gitanopsis vilordes J. L. Barnard 1962.
Type locality: Southern California. Distribution: Southeastern Alaska to southern California; shallow littoral depths.

Family Ampithoidae

Ampithoe dalli Shoemaker, 1938.
Ampithoe simulans: Barnard 1965 (non Alderman 1936).
Type locality: Yakutat Bay, Alaska. Distribution: Bering Island, Aleutian Islands to Cape Arago, Oregon; ?Pacific coast of Russia; low intertidal zone to 10 m.

Ampithoe kussakini Gurjanova, 1955.
Type locality: Otradnaya Bay, Shikotan Island, Tatar Strait, Kuril Islands, Russia. Distribution: Aleutian Islands to Quatsino Sound, Vancouver Island, British Columbia; Kuril Islands; low to mid-intertidal zone to 15 m.

Ampithoe lacertosa Bate, 1858. Sea lettuce sea flea.
Amphithoe lacertosa Bate 1858; *Amphithoe macrurus* Stephensen 1944; *Dexamine scitulus* Harford 1877; *Amphithoe scitulus*: Holmes 1904.
Type locality: Not traced. Distribution: Aleutian Islands to Magdalena Bay in Baja California, Mexico; Japan, south to Shizuoka prefecture; depths to 10 m.

Ampithoe rubricatoides Shoemaker, 1938.
Type locality: Kiska Island, Aleutian Islands. Distribution: Aleutian Islands and Pribilof Islands, Alaska; 10–18 m.

Ampithoe sectimanus Conlan and Bousfield, 1982.
Ampithoe pollex: J. L. Barnard 1954 (non Kunkel 1910).
Type locality: Point east of Point Marsh, Prince of Wales Island, Alaska. Distribution: Prince William Sound, Alaska, to Cape Arago, Oregon; intertidal zone.

Ampithoe simulans Alderman, 1936.
Type locality: Moss Beach, San Mateo County, California. Distribution: St. Makarius Bay, Amchitka Island, Alaska, south to Cannon Beach, Clatsop County, Oregon; intertidal zone to 4 m.

Ampithoe volki Gurjanova, 1938.
Type locality: Sea of Japan. Distribution: Amchitka Island, Alaska; Sea of Japan, Prebrazheu'e Bay region, Russia, Tatar Strait and northern Kuril Islands; depths to 3 m.

Cymadusa uncinata (Stout, 1912).
Acanthogrubia uncinata Stout 1912; *Paragrubia uncinata*: Shoemaker 1941.
Type locality: Laguna Beach, California. Distribution: Baranof Island, Alaska, to Laguna Beach, California; low tidal and shallow subtidal zones.

Peramphithoe eoa (Brüggen, 1907).
Type locality: Spitsbergen. Distribution: Alaska; Eastern North Atlantic; littoral zone.

Peramphithoe humeralis (Stimpson, 1864). Kelp amphipod.
Type locality: Puget Sound, Washington. Distribution: Prince William Sound, Alaska, to Guadalupe Island, Baja California, Mexico; intertidal zone to 70 m.

Peramphithoe lindbergi (Gurjanova, 1938).
Amphithoe lindbergi Gurjanova 1938; *Ampithoe femorata*: J. L. Barnard 1952 (non Krøyer 1845).
Type locality: Sea of Japan. Distribution: Prince William Sound, Alaska, to Corona del Mar, California; Bering Sea; Okhotsk Sea; Sea of Japan; intertidal zone to 18 m.

Peramphithoe mea (Gurjanova, 1938).
Amphithoe mea Gurjanova 1938.
Type locality: Sea of Japan. Distribution: Aleutian Islands; Sea of Japan; 5–60 m.

Peramphithoe stypotrupetes Conlan and Chess, 1992.
Type locality: Whitesboro Cove, Mendocino County, California. Distribution: Baranof Island, Southeast Alaska, to California; this species inhabits kelp.

Peramphithoe tea (J. L. Barnard, 1965).
Ampithoe tea Barnard 1965.
Type locality: Southern California. Distribution: Prince William Sound, Alaska, to Baja California, Mexico; intertidal zone to 67 m.

Family Anisogammaridae

Anisogammarus amchitkana Bousfield, 2001.
Type locality: Square Bay, Cyril Cove, Amchitka Island, Aleutian Islands. Distribution: Amchitka and Aleutian Islands; to depths of 10 m.

Anisogammarus pugettensis (Dana, 1853).
Gammarus pugettensis Dana 1853.
Type locality: Puget Sound, Washington. Distribution: Aleutian Islands and southeastern Alaska to northern California; low intertidal to subtidal zones.

Remarks: A very similar form of this species (subsp. *dybovskyi*) is found in the northern Sea of Japan and Sea of Okhotsk (Derzhavin, 1927).

Anisogammarus slatteryi Bousfield, 2001.
Type locality: Pachena Bay, Vancouver Island, British Columbia. Distribution: Bering Sea south to Washington; to depths of 13 m.

Barrowgammarus macginitiei (Shoemaker, 1955).
Anisogammarus macginitiei Shoemaker 1955.
Type locality: Point Barrow, Alaska. Distribution: Beaufort Sea; Okhotsk Sea; sublittoral zone.

Carineogammarus makarovi (Bulyscheva, 1952).
Anisogammarus schmitti Shoemaker 1964.
Type locality: Western North Pacific. Distribution: Western North Pacific; Aleutian Islands and southern Alaska; littoral zone.

Eogammarus confervicolus (Stimpson, 1856).
Mara confervicola Stimpson 1856; *Gammarus confervicolus*: Stimpson 1857; *Melita confervicola*: Stebbing 1906; *Anisogammarus (Eogammarus) confervicolus*: J. L. Barnard 1954.
Type locality: Hokkaido, Japan. Distribution: Southern Alaska to southern California; western North Pacific; depths to 30 m.

Eogammarus psammophilus Bousfield, 1979.
Type locality: Aleutian Islands. Distribution: Aleutian Islands to Washington State; 0–30 m.

Locustogammarus levingsi Bousfield, 1979.
Type locality: Queen Charlotte Islands, British Columbia, Canada. Distribution: Kenai Peninsula and southeastern Alaska to southern Vancouver Island, British Columbia; upper tidal levels to shallow subtidal zone.

Locustogammarus locustoides (Brandt, 1851).
Anisogammarus locustoides Brandt 1851; *Gammarus (Marinogammarus) locustoides*: Gurjanova 1951; *Anisogammarus (Eogammarus) locustoides*: Barnard 1954 (Alaska).
Type locality: Kamchatka. Distribution: Aleutian Islands and western Alaska, through Prince William Sound and southeastern Alaska to northern Queen Charlotte Islands and northern mainland coastal British Columbia; western North Pacific; intertidal and shallow subtidal zones.

Spasskogammarus tzvetkovae Bousfield, 1979.
Type locality: Amchitka Island, Aleutian Islands. Distribution: Known only from Amchitka and Unimak Islands of the Aleutian chain; rocky intertidal flats of high salinity beaches.

Spinulogammarus atchensis (Brandt, 1851).
Type locality: Atka, Aleutian Islands. Distribution: Atka, Unalaska, and Unimak islands of the Aleutian chain; rocky intertidal zone.

Spinulogammarus subcarinatus (Bate, 1862).
Type locality: Kamchatka. Distribution: Eastern Bering Sea; Aleutian Islands to Prince William Sound, south to Southeast Alaska and the central mainland coast of British Columbia; low to mid-tide levels.

Family Aoridae

Aoroides columbiae Walker, 1898.
Aoroides californica Alderman 1936.
Type locality: Puget Sound, Washington. Distribution: Amchitka Island, Alaska, to Oregon; ?Baja California; ?Hawaii; ?Japan; low intertidal zone to 85 m.

Aoroides exilis Conlan and Bousfield, 1982.
Type locality: Trial Island Point, Vancouver Island, British Columbia, Canada. Distribution: Klokachef Island, Southeast Alaska, south to Santa Maria Basin, California; intertidal zone to 50 m.

Aoroides intermedius Conlan and Bousfield, 1982.
Type locality: Haines Island, Barkley Sound, Vancouver Island, British Columbia, Canada. Distribution: Puffin Bay, Baranof Island, Southeast Alaska south to Mukkaw Bay at Sooes Pt., Clallam County, Washington; low intertidal zone to 63 m.

Aoroides spinosus Conlan and Bousfield, 1982.
Aoroides columbiae: Barnard 1954 (non Walker 1898).
Type locality: Willis Beach, Victoria, Vancouver Island, British Columbia, Canada. Distribution: Prince William Sound, Alaska, south to Netart's Bay at Wilson Beach, Tillamook County, Oregon; low intertidal zone to 45 m.

Arctolembos arcticus (Hansen, 1887).
Microdeutopus arcticus Hansen 1887; *Lembos arcticus* (Hansen); *Autonoe arctica* Della Valle 1893.
Type locality: Kara Sea. Distribution: Chukchi, Bering, and Kara seas; subtidal up to 38 m.

Columbaora cyclocoxa Conlan and Bousfield, 1982.
Type locality: Klokachef Island, Chichagof Island, Alaska. Distribution: Southeastern Alaska (Chichagof Island) to Mukkaw Bay, Washington; low intertidal zone to 20 m.

Neohela intermedia Coyle and Mueller, 1981.
Type locality: Gulf of Alaska. Distribution: Bering Sea to southern Alaska; depth unknown.

Neohela monstrosa (Boeck, 1861).
Hela monstrosa Boeck 1861.
Type locality: Norway. Distribution: Beaufort Sea; Spitsbergen; Skaggerak; Kattegat; Faeroe Isles; material in Norway collected at 183–550 m.

Unciola leucopis (Krøyer, 1845).
Glauconome leucopis Krøyer 1845.

Type locality: Greenland. Distribution: Beaufort Sea; Barents Sea; Kara Sea; Russian Arctic; Greenland; Spitsbergen; 165–220 m.

Family Argissidae

Argissa hamatipes (Norman, 1869).

Syrrhoe hamatipes Norman 1869; *Argissa typica* Boeck 1871.

Type locality: Shetland Islands. Distribution: Cosmopolitan; littoral zone to lower bathyal zone.

Family Aristiidae

Aristias androgans J. L. Barnard, 1964.

Type locality: Near Islands, Alaska. Distribution: Known only from type locality; 881 m; rare.

Aristias tumidus (Krøyer, 1846).

Anonyx tumidus Krøyer 1846; *Lysianassa tumida* (Krøyer 1846); *Aristias arcticus* Schneider 1884.

Type locality: Greenland. Distribution: Arctic Ocean; Beaufort Sea; Greenland; Spitsbergen; Franz Josef Land; Norway; littoral zone.

Family Atylidae

Atylus atlassovi (Gurjanova, 1951).

Nototropis atlassovi Gurjanova 1951.

Type locality: Kamchatka Peninsula, Sea of Okhotsk. Distribution: Sea of Okhotsk to the Aleutian Islands and Bering Sea; shallow subtidal zone.

Atylis borealis Bousfield and Kendall, 1994.

Atylis tridens Mills 1961 (pelagic stage), Barnard and Karaman 1991 (in part?).

Type locality: Yakan Pt., Graham Island, Queen Charlotte Islands, British Columbia. Distribution: Southeastern Alaska to the Strait of Juan de Fuca; shallow subtidal zone.

Atylus bruggeni (Gurjanova, 1938).

Nototropis bruggeni Gurjanova 1938.

Type locality: Sea of Japan. Distribution: Bering Sea and Sea of Japan; St. Lawrence Island and the Pribilof Islands to the Aleutian Island chain and mainland Alaska; intertidal zone to 20 m.

Atylus carinatus (J. C. Fabricius, 1793).

Gammarus carinatus Fabricius 1793.

Type locality: Not traced. Distribution: Holarctic, in North America south to the Saguenay Fjord, Canada, in the east, and northern Bering Sea (Kotzebue Sound) in the west; intertidal zone to 50 m.

Atylus collingi (Gurjanova, 1938).

Nototropis collingi Gurjanova 1938.

Type locality: Sea of Japan. Distribution: Eastern North Pacific, Chukchi Sea south to the Aleutian Islands and to Puget Sound, Washington; western North Pacific, western Bering Sea to Sea of Japan; 3–10 m.

Atylus georgianus Bousfield and Kendall, 1994.

Atylus collingi: Mills 1961, Staude 1987 (in part?), Barnard and Karaman 1991 (in part).

Type locality: British Columbia. Distribution: Southern Alaska to Oregon; shallow water.

Atylus levidensus J. L. Barnard, 1956.

Type locality: California. Distribution: Southeastern Alaska (Prince William Sound) to Central California; lower intertidal zone.

Atylus smitti (Goës, 1866).

Paramphithoe smitti Goës 1866; *Nototropis smitti* (Goës 1866).

Type locality: Spitsbergen. Distribution: Widely distributed in the Arctic Ocean including the western Beaufort Sea, Finnmark, Greenland, Spitsbergen, and Russia; depth unknown.

Family Calliopiidae

Apherusa glacialis (H. J. Hansen, 1887).

Amphithopsis glacialis H. J. Hansen 1887; *Apherusa dubia* Vosseler 1889.

Type locality: Greenland. Distribution: Circum-Arctic; underside of ice cakes, in shallow water; uncommon in the Point Barrow region; depth unknown.

Apherusa megalops (Buchholz, 1874).

Paramphithoe megalops Buchholz 1874.

Type locality: Northeast Greenland. Distribution: Arctic Alaska and Canada; North Atlantic; depth unknown.

Apherusa retovskii Gurjanova, 1934.

Type locality: Russian Arctic. Distribution: Arctic Alaska and Russia; Kamchatka; depth unknown.

Apherusa sarsi Shoemaker, 1930.

Halirages megalops Sars 1882; *Apherusa megalops* (Sars 1882).

Type locality: Arctic Canada. Distribution: Western Beaufort Sea; European waters; depth unknown.

Bouvierella carcinophila (Chevreaux, 1889).

Paramphithoe carcinophilus Chevreaux 1889; *Leptamphopus paripes* Stephensen 1931.

Type locality: Laurentian Channel, eastern Canada. Distribution: Olga Bay, Alaska, to Alica Arm, British Columbia; North Atlantic; sublittoral to abyssal depths.

Calliopius behringi Gurjanova, 1951.

?*Calliopius* sp. Fukika et al. 1971.

Type locality: Kamchatka Peninsula. Distribution: Bering Sea (Bering Strait, Commander Islands, and Kamchatka Peninsula); littoral zone.

Calliopius carinatus Bousfield and Hendrycks, 1997.

Calliopius laeviusculus: Barnard 1954, Wailes 1933, Austin 1985 (in part), Barnard and Karaman 1991 (in part)?; *Calliopius carinatus* Shaw MS 1987.

Type locality: Juan de Fuca Strait, British Columbia. Distribution: Eastern Prince William Sound, Alaska, to the central coast of Oregon; surf swash zone.

Calliopius columbianus Bousfield and Hendrycks, 1997.

Calliopius laeviusculus: Barnard 1971 (in part)?, Austin 1985 (in part); *Calliopius* spp. Staude 1987 (in part)?.

Type locality: Vancouver Island, British Columbia. Distribution: Southeast Alaska (Sitka) to Oregon; swash zone to depths of 160 m.

Calliopius pacificus Bousfield and Hendrycks, 1997.

Calliopius laeviusculus: Barnard 1954 (in part).

Type locality: Georgia Strait, British Columbia. Distribution: Prince William Sound, Alaska, to the central coast of Oregon; inshore waters of bays and estuaries.

Halirages fulvocinctus (M. Sars, 1858).

Amphithoe fulvocincta M. Sars 1858; *Pherusa tricuspis* Stimpson 1863.

Type locality: Norway. Distribution: Widely distributed in the Arctic, including Arctic Alaska; 2–470 m.

Halirages qvadridentatus G. O. Sars, 1877.

Halirages quadridentata G. O. Sars 1877.

Type locality: Norway. Distribution: Beaufort Sea; North Atlantic; depth unknown.

Laothoes pacificus Gurjanova, 1938.

Type locality: Sea of Japan. Distribution: Alaska; Sea of Japan; depth unknown.

Oligochinus lighti J. L. Barnard, 1969.

Type locality: Monterey Bay, California. Distribution: Aleutian Islands, southeastern Alaska (Sitka) to central California; intertidal zone.

Paracalliopiella beringiensis Bousfield and Hendrycks, 1997.

Type locality: King Island, Alaska, Bering Sea. Distribution: Northern Bering Sea (Little Diomede to St. Lawrence Island); shallow subtidal zone.

Paracalliopiella bungei (Gurjanova, 1951).

Halirages bungei Gurjanova 1951.

Type locality: Western North Pacific. Distribution: Bering Sea; Aleutian Islands; eastern shores of the Kamchatka Peninsula; to depths of 60 m.

Paracalliopiella haliragoides Bousfield and Hendrycks, 1997.

Type locality: Holkham Bay, southeastern Alaska. Distribution: Known only from type locality; intertidal zone; rare.

Paracalliopiella kudrjaschovi Bousfield and Hendrycks, 1997.

Type locality: English Bay, St. Paul Island, Bering Sea. Distribution: Northeastern Bering Sea, from Bering Strait and Pribilof Islands south to Prince William Sound; to depths of 20 m.

Paracalliopiella pacifica Tzvetkova and Kudrjaschov, 1975.

Type locality: Peter the Great Bay. Distribution: Aleutian Islands; Commander Islands; shores of Kamchatka Peninsula and Kuril Islands to the northwestern Sea of Japan; middle and lower littoral zone.

Paracalliopiella pratti (J. L. Barnard, 1954).

Calliopiella pratti J. L. Barnard; *Callaska pratti*: J. L. Barnard; *Apherusa* sp. Park 1961.

Type locality: Oregon. Distribution: Kenai Peninsula, Prince William Sound, Alaska, to central California; intertidal zone.

Paracalliopiella slatteryi Bousfield and Hendrycks, 1997.

Type locality: English Bay, St. Paul Island, Bering Sea. Distribution: St. Paul Island, Bering Sea to Prince William Sound, Alaska; intertidal zone.

Paracalliopiella tzvetkovae Bousfield and Hendrycks, 1997.

Paracalliopiella litoralis (Gurjanova): Tzvetkova and Kudrjaschov 1975, Barnard and Karaman 1991 (in part).

Type locality: Provideniya Bay, Russia. Distribution: Bering Strait south to Southeast Alaska; western Bering Sea; depth unknown.

Weyprechtia heugleni (Buchholz, 1874).

Amathilla heuglini Buchholz 1874; *Weyprechtia mirabilis* Stuxberg 1880.

Type locality: Spitsbergen, Arctic Ocean. Distribution: Chukchi Sea; northern Bering Sea; Beaufort Sea; Okhotsk Sea; Kara Sea; Barents Sea; Spitsbergen; New Siberian Islands; 9–40 m; common at Point Barrow, Alaska.

Weyprechtia pinguis (Krøyer, 1838).

Gammarus pingvis Krøyer 1838; *Amathilla pinguis*: Buchholz 1874.

Type locality: Greenland. Distribution: Circumpolar; Point Barrow, Alaska; Sea of Okhotsk; North Atlantic and eastern Nearctic regions; 4–120 m.

Family Cebocaridae

Metacyphocaris helgae Tattersall, 1906.

Type locality: Ireland. Distribution: ?Cosmopolitan; Southern Alaska to southern California; North Atlantic; bathypelagic.

Family Cheluridae

?***Chelura terebrans*** Philippi, 1839.

Chelura nesaeoides White 1847; *Chelura pontica* Czerniavsky 1868; *Chelura xylophaga* Hesse 1868; *Chelura cambrica* McNeill 1932.

Type locality: Adriatic Sea. Distribution: Alaska to southern California; western North Pacific; North Atlantic; littoral zone.

Remarks: This species burrows in wood.

Family Corophiidae

Americorophium brevis (Shoemaker, 1949).

Corophium brevis Shoemaker 1949.

Type locality: Puget Sound, Washington. Distribution: Prince William Sound, Alaska, to San Francisco Bay, California; to depths of 35 m.

Americorophium salmonis (Stimpson, 1857).

Corophium salmonis Stimpson 1857.

Type locality: Puget Sound, Washington. Distribution: Kodiak Island, Alaska, to Puget Sound, Washington; shallow subtidal zone in high salinity estuaries and fjords.

Americorophium spinicorne (Stimpson, 1857).

Corophium spinicorne Stimpson 1857.

Type locality: San Francisco Bay, California. Distribution: Southeastern Alaska to central California; intertidal and shallow subtidal zones in estuaries; common.

Corophium bonelli Milne Edwards, 1830.

Corophia bonelli Milne Edwards 1830; *Corophium contractum* Stimpson 1856 (in part)?; non *Corophium bonelli*: Shoemaker 1920 [= *Crassicorophium clarencense* (Shoemaker 1949)].

Type locality: Not traced. Distribution: Circumarctic-boreal; Bering Sea coast of Alaska; western North Pacific Tatar Strait, northern Sea of Japan; North Atlantic; littoral zone.

Crassicorophium clarencense (Shoemaker, 1949).

Corophium clarencense Shoemaker 1949; *Corophium bonelli* forma Shoemaker 1920.

Type locality: Port Clarence, Grantley Harbor, Alaska. Distribution: Bering Sea south to Prince William Sound, Alaska; depth unknown.

Crassicorophium crassicorne (Bruzelius, 1859).

Corophium crassicorne Bruzelius 1859.

Type locality: Scandinavia. Distribution: Holarctic and subarctic; south to Sea of Japan in the western North Pacific and south to Washington in the eastern North Pacific; North Atlantic; intertidal zone to 37 m.

Goesia depressa (Goës, 1866).

Autonoe depressa Goës 1866; *Protomedeia depressa* (Goës 1866).

Type locality: Spitsbergen. Distribution: Beaufort Sea; North Atlantic; type material collected at 9 m.

Laticorophium baconi (Shoemaker, 1934).

Corophium baconi Shoemaker 1934.

Type locality: North of Paita, Peru. Distribution: Bering Sea to Peru, and into the Gulf of California; intertidal zone to 55 m.

Monocorophium acherusicum (Costa, 1851).

Corophium acherusicum Costa 1851.

Type locality: Eastern North Atlantic. Distribution: Alaska to California; Japan; cosmopolitan in temperate and tropical coastal regions; shallow subtidal zone.

Monocorophium carlottensis Bousfield and Hoover, 1997.

Corophium insidiosum (Crawford): Staude 1987.

Type locality: Codfish Bay, Queen Charlotte Islands, British Columbia. Distribution: Prince William Sound, Alaska, to the north-central mainland coast of British Columbia; intertidal zone to 10 m.

Monocorophium steinegeri (Gurjanova, 1951).

Corophium steinegeri Gurjanova 1951.

Type locality: Eastern Kamchatka. Distribution: Bering Sea to Queen Charlotte Islands, British Columbia; northern Sea of Okhotsk and Kamchatka; intertidal zone.

Family Cyphocarididae

Cyphocaris challengeri Stebbing, 1880.

Cyphocaris alicei Chevreux 1905; *Cyphocaris kincaidi* Thorsteinson 1941.

Type locality: 400 miles north of the Hawaiian Islands. Distribution: ?Cosmopolitan: Bering Sea and Aleutian Islands south to Oregon; North Atlantic; depth unknown.

Family Dexaminidae

Guernea nordenskioldi (Hansen, 1888).

Type locality: Greenland. Distribution: Beaufort Sea; North Atlantic; depth unknown.

Polycheria osborni Calman, 1898.

Type locality: Puget Sound, Washington. Distribution: Southeastern Alaska to central California; commensal in tunicates and sponges.

Family Epimeriidae

Epimeria loricata G. O. Sars, 1879.

Epimeria conscpicua Stebbing 1883.

Type locality: Norway. Distribution: Panarctic, including Beaufort Sea; depth unknown.

Paramphithoe hystrix (Ross, 1835).

Acanthosoma hystrix Ross 1835; *Amphithoe histrix* (Ross 1835); *Acanthozone cuspidata* (Ross 1835).

Type locality: Greenland. Distribution: Beaufort Sea; North Atlantic; depth unknown.

Paramphithoe polyacantha (Murdoch, 1885).
Acanthozone polyacantha Murdoch 1885.
Type locality: Arctic Alaska (Point Franklin). Distribution: Arctic Ocean; 24–128 m.

Uschakoviella echinophora Gurjanova, 1955.
Type locality: Sturup Island, Kuril Islands. Distribution: Boreal North Pacific; ?Antarctic; littoral to abyssal.

Family Eusiridae

Eusirella multicalceola (Thorsteinson, 1941).
Gracilipes multicalceolus Thorsteinson 1941.
Type locality: Gulf of Alaska. Distribution: North Pacific— Gulf of Alaska; Kuril-Kamchatka Trench; east of the Ramapo Deep; ?Bering Sea; 500–2000 m.

Eusirus columbianus Bousfield and Hendrycks, 1995.
Eusirus leptocarpus: ?Wailes 1931, ?Fulton 1968, ?Austin 1985.
Type locality: Koprino Harbor, northern Vancouver Island, British Columbia. Distribution: Southeast Alaska to southern British Columbia; depth to 125 m.

Eusirus cuspidatus Krøyer, 1845.
Type locality: Greenland. Distribution: Circum-Arctic; depth unknown.

Rhachotropis aculeata (Lepechin, 1780).
Oniscus aculeata Lepechin 1780.
Type locality: Not traced. Distribution: Circumpolar; Chukchi Sea and Point Barrow, Alaska; western North Pacific south to Sea of Japan; 35–50 m.

?***Rhachotropis boreopacifica*** Bousfield and Hendrycks, 1995.
Type locality: Vancouver Island, British Columbia. Distribution: ?Southern Alaska to British Columbia; type material collected at 549 m.

Rhachotropis conlanae Bousfield and Hendrycks, 1995.
Rhachotropis inflata: Austin 1985 (in part).
Type locality: Bactrian Point, Boca de Quadra, Southeast Alaska. Distribution: Known only from type locality; 29 m; rare.

Rhachotropis helleri Boeck, 1871.
Type locality: Not traced. Distribution: Holarctic; Chukchi Sea and Bering Sea; ?British Columbia; western North Pacific; North Atlantic; depth unknown.

Rhachotropis inflata (G. O. Sars, 1883).
Tritropis inflata Sars 1883; *Rhachotropis tumida* Sars 1893.
Type locality: Norway. Distribution: Widely distributed in the Arctic; Bering Sea to California; to a depth of about 100 m.

Rhachotropis natator (Holmes, 1908).
Gracilipes natator Holmes 1908.
Type locality: Santa Catalina Islands, California. Distribution: Gulf of Alaska to southern California; western North Pacific; 930–5000 m.

Rhachotropis oculata (Hansen, 1887).
Tritropis oculata Hansen 1887.
Type locality: Greenland. Distribution: Circum-Arctic; North Pacific from Bering Sea to California; Okhotsk Sea and Sea of Japan. North Atlantic from Greenland and Labrador to Cape Cod; 18–274 m.

Rozinante fragilis (Goës, 1866).
Paramphithoe fragilis Goës 1866; *Apherusa fragilis* (Goës 1866).
Type locality: Spitsbergen. Distribution: Beaufort Sea; Greenland; Spitsbergen; Barents Sea; Cape Wynn; 6–372 m.

Family Gammaracanthidae

Gammaracanthus loricatus Sabine, 1821.
Gammaracanthus aestuariorum Lomakina 1952.
Type locality: Not traced. Distribution: Arctic Alaska and Canada; North Atlantic; depth unknown.

Family Gammaroporeiidae

Gammaroporeia alaskensis (Bousfield and Hubbard, 1968).
Micruropus alaskensis Bousfield and Hubbard 1968.
Type locality: Prince William Sound, Alaska. Distribution: Southern Alaska to northern Vancouver Island; littoral zone.

Family Gammaridae

Gammarus locusta (Linnaeus, 1758).
Cancer locusta Linnaeus 1758.
Type locality: Not traced. Distribution: Widely distributed in the Arctic Ocean, including the Beaufort Sea; intertidal zone to 100 m.

Gammarus oceanicus Segerstråle, 1947.
Gammarus zaddachi oceanicus Segerstråle 1947.
Type locality: North Atlantic. Distribution: Widely distributed in the Arctic Ocean, including the Beaufort Sea; intertidal zone to 25 m.

Gammarus setosus Dementieva, 1931.
Type locality: Not traced. Distribution: Circum-Arctic; in the eastern North Pacific south to British Columbia; North Atlantic; littoral zone.

Family Haustoriidae

Eohaustorius eous (Gurjanova, 1951).
Haustorius eous Gurjanova 1951; *Eohaustorius eous eous* Gurjanova 1962.

Type locality: Kamchatka. Distribution: Bering Sea, Alaska; Sea of Okhotsk; subtidal to 25 m.

Eohaustorius washingtonianus (Thorsteinson, 1941).
Haustorius washingtonianus Thorsteinson 1941.
Type locality: Washington. Distribution: Prince William Sound, Alaska, to Oregon; mid-tide to shallow subtidal levels.

Family Hyalellidae

Allorchestes angusta Dana, 1856.
Type locality: California. Distribution: Aleutian Islands and Southeast Alaska to southern California; intertidal zone.

Allorchestes bellabella Barnard, 1974.
Allorchestes subcarinata Bousfield 1981; non *Allorchestes angusta*: Barnard 1954.
Type locality: Kiska Harbor, Alaska. Distribution: Aleutian Islands and southeastern Alaska to Oregon; Kamchatka; Commander Islands; 1.2–12 m.

Allorchestes carinata Iwasa, 1939.
Allorchestes malleolus carinatus Iwasa 1939.
Type locality: Japan. Distribution: Subarctic and boreal pan-Pacific; Bering Sea and the Aleutian Island chain to Southeast Alaska and northern British Columbia; northern Sea of Japan; Okhotsk Sea and Kamchatka Peninsula; 0.5–4 m.

Allorchestes malleola Stebbing, 1899.
Allorchestes vladimiri Derzhavin 1937.
Type locality: Korean and Japanese waters: 31°40′N, 125°50′E, Tong-kai, in seaweed (Studer collection); 34°14′N, 129°34′E, in seaweed, Korea (Andréa); 34°40′N, 129°50′E, Japan (Andréa); 37°0′N, 131°20′E (Studer collection). Distribution: Aleutian Islands to ?Southeast Alaska; northern Sea of Japan, Okhotsk Sea, Kamchatka; low intertidal to 4 m.

Allorchestes priceae Hendrycks and Bousfield, 2001.
Allorchestes urocarinata Bousfield 1981 (*nomen nudum*).
Type locality: Puffin Bay, Baranof Island, Southeast Alaska. Distribution: Southeast Alaska to southern British Columbia; lower intertidal and shallow subtidal zones.

Allorchestes rickeri Hendrycks and Bousfield, 2001.
Allorchestes parva Bousfield 1981 (*nomen nudum*), Bousfield 2001.
Type locality: Neskowin Bay, Oregon. Distribution: Southeast Alaska to California; intertidal zone.

?Hyalella azteca Saussure, 1858.
Type locality: Mexico. Distribution: Southeast Alaska south to Mexico; estuarine.
Remarks: DNA barcoding and phylogeographic research has shown that *Hyalella azteca sensu lato* is composed of numerous cryptic species (Witt and Hebert, 2000; Witt et al., 2006; Hrycyshyn, 2015). It is highly likely that Alaska records represent a species new to science.

Family Hyalidae

Apohyale anceps (J. L. Barnard, 1969).
Allochestes anceps Barnard 1969; *Hyale anceps*: Barnard 1974.
Type locality: California. Distribution: Aleutian Islands and southeastern Alaska to southern California; intertidal zone to shallow subtidal zone.

Apohyale pugettensis (Dana, 1853).
Allorchestes pugettensis Dana 1853; *Hyale pugettensis*: Bulycheva 1957, Bousfield 1981, Austin 1985, Staude 1987, Barnard and Karaman 1991.
Type locality: Cox Point, Trutch Island, British Columbia. Distribution: Southern Alaska to central California; high water level.

Parallorchestes alaskensis Bousfield and Hendrycks, 2002.
Parallorchestes crenulata Bousfield 1981 (*nomen nudum*).
Type locality: Massacre Bay, Attu Island, Aleutian Islands. Distribution: Known only from type locality; intertidal zone; rare.

Parallorchestes americana Bousfield, 1981.
Type locality: Puffin Bay, Baranof Island, Southeast Alaska. Distribution: Prince William Sound, Alaska, to central California; littoral zone.

Parallorchestes carinata Bousfield and Hendrycks, 2002.
Parallorchestes supracarinata Bousfield 1981 (*nomen nudum*), Bousfield 2001.
Type locality: Amchitka Island, Aleutian Islands. Distribution: Zolotoi Bay, St. Paul Island, Bering Sea, and Aleutian Islands; intertidal zone.

Parallorchestes cowani Bousfield and Hendrycks, 2002.
Pallarchestes ochotensis: Barnard 1952, 1954, 1964, 1969, Barnard and Karaman 1991; *Pallorchestes spinosa* Bousfield 1981 (*nomen nudum*).
Type locality: Southern Vancouver Island, British Columbia. Distribution: Aleutian Islands and southern Alaska to central California; intertidal zone.

Parallorchestes kabatai Bousfield and Hendrycks, 2002.
Parallorchestes occidentalis Bousfield 1981 (*nomen nudum*), 2001.
Type locality: Puffin Bay, Baranof Island, southeastern Alaska. Distribution: Aleutian Islands and southern Alaska to Vancouver Island; intertidal zone.

Parallorchestes ochotensis (Brandt, 1851).

Allorchestes ochotensis Brandt 1851; *Hyale ochotensis*: Stebbing 1888; *Parhyale kurilensis* Iwasa 1934; *Parhyale ochotensis*: Gurjanova 1951.

Type locality: Sea of Okhotsk. Distribution: Dutch Harbor, Aleutian Islands; Okhotsk Sea; northern Sea of Japan; Russia; Sakhalin Island; depth unknown.

Parallorchestes subcarinata Bousfield and Hendrycks, 2002.

Type locality: St. Makarius Bay, Amchitka Island, Aleutian Islands. Distribution: Aleutian Islands to Kruzof Island, southeastern Alaska; low intertidal zone.

Protohyale hiwatarii Bousfield and Hendrycks, 2002.

Hyale spinosa Bousfield 1981 (unpubl. MS); *Protohyale spinosa*: Bousfield 2001 (*nomen nudum*).

Type locality: Friday Harbor, Washington. Distribution: Southeastern Alaska to Oregon; low intertidal zone.

Protohyale jarrettae Bousfield and Hendrycks, 2002.

Hyale intermedia Bousfield 1981 (*nomen nudum*); *Protohyale intermedia*: Bousfield 2001.

Type locality: Brady Beach, Trevor Channel, southern Vancouver Island, British Columbia. Distribution: Southeastern Alaska to Oregon; intertidal zone.

Protohyale lamberti Bousfield and Hendrycks, 2002.

Hyale frequens: Barnard 1954 (Oregon), Bousfield 1981, Austin 1985, Staude 1987, Barnard and Karaman 1991 (in part); non *Hyale frequens* (Stout 1913) (Laguna Beach); non *Hyale frequens*: Barnard 1962 (southern California).

Type locality: Trial Island Point, Victoria, southern Vancouver Island, British Columbia. Distribution: Southeastern Alaska to central California; intertidal zone.

Protohyale longipalpa Bousfield and Hendrycks, 2002.

Leptohyale longipalpa Bousfield 1981 (unpubl. MS), Bousfield 2001 (*nomen nudum*).

Type locality: West of Pt. Eugenia, San Juan Batista Island, Alexander Archipelago, southeastern Alaska. Distribution: Southeastern Alaska to Oregon; intertidal to shallow subtidal zones.

Protohyale oclairi Bousfield and Hendrycks, 2002.

Hyale oclairi Bousfield 1981 (unpublished MS).

Type locality: Eagle Cove, San Juan Island, Washington. Distribution: Southeastern Alaska to Oregon; low intertidal zone.

Protohyale seticornis Bousfield and Hendrycks, 2002.

Hyale seticornis Bousfield 1981 (*nomen nudum*).

Type locality: Haines Island, Trevor Channel, Berkley Sound, southern Vancouver Island, British Columbia. Distribution: Southeastern Alaska to central California; intertidal and shallow subtidal zones.

Ptilohyale plumulosa (Stimpson, 1857).

Allorchestes plumulosa Stimpson 1857; *Hyale plumolosus*: Thorsteinson 1941; *Hyale plumulosa*: Barnard 1969, 1979, Austin 1985, Staude 1987, Barnard and Karaman 1991; non *Hyale plumulosa*: Bousfield 1973, Griffiths 1976.

Type locality: Diana Island, Trevor Channel beach, southern Vancouver Island, British Columbia. Distribution: Southeastern Alaska to Baja California, Mexico; intertidal to shallow subtidal zones.

Family Isaeidae

Cheirimedeia macrodactyla Conlan, 1983.

Type locality: North of St. Lawrence Island, Bering Sea. Distribution: Known only from type locality; depths to 30 m; rare.

Cheirimedeia similicarpa Conlan, 1983.

Type locality: North of Diana Island, Barkley Sound, Vancouver Island, British Columbia. Distribution: Northeast of St. Lawrence Island, Bering Sea, to southern Vancouver Island, British Columbia; 21–67 m.

Gammaropsis ellisi Conlan, 1983.

Type locality: Goletas Channel, British Columbia. Distribution: Dall Island, southeastern Alaska, to Trial Island, Vancouver Island, British Columbia; intertidal zone to 72 m.

Gammaropsis melanops G. O. Sars, 1883.

Eurystheus melanops (G. O. Sars 1883).

Type locality: Norway. Distribution: Beaufort Sea; North Atlantic; depth unknown.

Gammaropsis nitida (Stimpson, 1853).

Podoceropsis nitida (Stimpson 1853); *Gammaropsis rimapalma* Bate 1862; *Gammaropsis tuberculosa* Bate 1862; *Gammaropsis caudadentata* Norman 1867; *Gammaropsis batei* Boeck 1871; *Gammaropsis megacheir* S. I. Smith 1874; *Podoceropsis excavata* Sars 1894.

Type locality: Bay of Fundy. Distribution: Circumboreal: Arctic Ocean at Bering, Chukchi, and East Siberian seas; North Pacific at Kodiak Island, Alaska; North Atlantic at Norway, Kattegat, Holland, France as far south as Boulonge, British Isles, New England as far south as Connecticut; 40–150 m.

Gammaropsis thompsoni (Walker, 1898).

Maeroides thompsoni Walker 1898; *Gammaropsis tenuicornis* Holmes 1904; *Fimbriella robusta* Stout 1913; *Podoceropsis concava* Shoemaker 1931; *Eurystheus thompsoni*: Shoemaker 1955, J. L. Barnard 1959.

Type locality: Puget Sound, Washington. Distribution: Southeastern Alaska to San Diego, California; low intertidal zone to 91 m.

Pareurystheus alaskensis (Stebbing, 1910).

Eurystheus dentatus Holmes 1908.

Type locality: Alaska. Distribution: Unalaska Island, Aleutian Islands; and Afognak Island; 3–90 m.

Paraeurystheus tzvetkovae Conlan, 1983.

Type locality: Constantine Harbour, Amchitka Island, Aleutian Islands. Distribution: Known only from type locality; depth unknown; rare.

Photis bifurcata J. L. Barnard, 1962.

Type locality: Southern California. Distribution: Chichagof Island, Alaska, south to Bahia de San Cristobal, Baja California; shallow subtidal to 109 m.

Photis brevipes Shoemaker, 1942.

Photis californica: J. L. Barnard 1954 (non Stout 1913).

Type locality: Magdalena Bay, Baja California. Distribution: Prince William Sound, Alaska, south to Bahia Magdalena, Baja California, Mexico; shallow subtidal to 492 m.

Photis fischmanni Gurjanova, 1938.

Type locality: Sea of Japan. Distribution: Bering Sea, off St. Lawrence Island, Alaska; Kamchatka, Russia; Chukchi Sea; Kuril Islands, Russia; 7–38 m.

?***Photis kurilica*** Gurjanova, 1955.

Type locality: Kuril Islands. Distribution: ?Aleutian Islands; Kuril Islands; depth unknown.

Photis oligochaeta Conlan, 1983.

Type locality: Rennison Island, British Columbia. Distribution: Taigud Island, Alaska, to East Sooke, Vancouver Island, British Columbia; intertidal zone to 22 m.

Photis pachydactyla Conlan, 1983.

Type locality: Broken Islands, west side of Wouwer Island, Barkley Sound, Vancouver Island, British Columbia. Distribution: Puffin Bay, Alaska, to Edward King Island, Barkley Sound, Vancouver Island, British Columbia; intertidal zone to 90 m.

Photis reinhardi Krøyer, 1842.

Photis pygmaea Liljeborg 1852.

Type locality: Greenland. Distribution: Beaufort Sea; Greenland; Iceland; Norway; North Atlantic; 4–94 m.

Photis cf. ***spasskii*** Gurjanova, 1951.

Type locality: Kamchatka, Russia. Distribution: Northeast of St. Lawrence Island, Bering Sea, to Lelu Island, British Columbia; intertidal zone to 21 m.

Remarks: Conlan (1983) noted some differences from the type description of Gurjanova but hesitated to describe it as a new species or subspecies.

Photis tenuicornis G. O. Sars, 1882.

Type locality: Norway. Distribution: Beaufort Sea; Greenland; Norway; British Isles; 50–75 m.

Photis vinogradovi Gurjanova, 1951.

Type locality: Not traced. Distribution: Beaufort Sea; depth unknown.

Podoceropsis amchitkensis Conlan, 1983.

Type locality: St. Makarius Bay, Amchitka Island, Aleutian Islands. Distribution: Known only from type locality; littoral zone; rare.

Podoceropsis barnardi Kudrjaschov and Tzvetkova, 1975.

Type locality: Shantar Islands, Okhotsk Sea, Russia. Distribution: Aleutian Islands; southern Alaska; Okhotsk Sea; depth unknown.

Podoceropsis chionoecetophila Conlan, 1983.

Type locality: Coos Bay, Oregon. Distribution: Bering Sea near Amchitka Island, Alaska, to Oregon; 36–600 m.

Remarks: Apparently a commensal on the eggs of the Tanner crab *Chionoecetes tanneri.*

Podoceropsis inaequistylis Shoemaker, 1930.

Type locality: Cheticamp Island, Nova Scotia. Distribution: Beaufort Sea; Nova Scotia; type material collected at 45 m.

Podoceropsis lindahlii Hansen, 1888.

Type locality: Davis Strait, West Greenland. Distribution: Beaufort Sea; Greenland; type material collected at 91 m.

Podoceropsis setosa Conlan, 1983.

Type locality: Bering Sea near Amchitka Island, Aleutian Islands. Distribution: Known only from type locality; littoral zone; rare.

Protomedeia fasciata Krøyer, 1842.

Type locality: Greenland. Distribution: Bering Sea, northeast of St. Lawrence Island; Okhotsk Sea; Russia; Arctic Ocean; North Atlantic (American and European coasts); North Sea; British Isles; 5–150 m.

Protomedeia grandimana Brüggen, 1905.

Type locality: Murman Coast, Kara Sea, Spitsbergen. Distribution: Chukchi Sea; St. Lawrence Island, Bering Sea to southern British Columbia; Sea of Okhotsk, Russia; Spitsbergen; intertidal zone to 200 m.

Protomedeia stephenseni Shoemaker, 1955.

Protomedeia grandimana: Stephensen 1942 (in part).

Type locality: Point Barrow, Alaska. Distribution: Bering Sea; Point Barrow, Alaska; eastern Iceland; northern Norway; Greenland; depths to 30 m.

Family Ischyroceridae

Ericthonius megalops (G. O. Sars, 1879).

Cerapus megalops G. O. Sars 1879.

Type locality: Norway. Distribution: Beaufort Sea; North Atlantic; depth unknown.

Erichthonius rubricornis (Stimpson, 1853).

Cerapus rubricornis Stimpson 1853; *Cerapus hunteri* Bate 1862.

Type locality: Bay of Fundy, Nova Scotia, Canada. Distribution: Bering Sea to southern California; western North Atlantic; intertidal zone to 1000 m.

Ericthonius tolli Bruggen, 1909.

Type locality: Russian Arctic. Distribution: Chukchi and Beaufort seas; eastern Bering Sea; North Atlantic; depth unknown.

Ischyrocerus anguipes (Kröyer, 1838).

Ischyrocerus zebra Rathke 1843; *Ischyrocerus fucicola* Stimpson 1853; *Ischyrocerus minutus* Liljeborg 1855; *Ischyrocerus isopus* Walker 1889.

Type locality: Greenland. Distribution: Circumpolar, widely distributed in the Arctic Ocean, North Pacific, and North Atlantic; low tide level to 200 m.

Ischyrocerus chamissoi Gurjanova, 1951.

Type locality: Not traced. Distribution: Beaufort Sea; depth unknown.

Ischyrocerus commensalis Chevreux, 1900.

Type locality: Newfoundland. Distribution: Beaufort Sea; Pavlof Bay, Alaska Peninsula; Gulf of St. Lawrence; Jugor Strait; West Greenland; as deep as 682 m.

Ischyrocerus latipes Krøyer, 1842.

Ischyrocerus assimilis G. O. Sars 1879; *Ischyrocerus pachtusovi* Gurjanova 1933.

Type locality: Greenland. Distribution: Beaufort Sea; North Atlantic; 15–188 m.

Ischyrocerus megacheir (Boeck, 1871).

Podocerus megacheir Boeck 1871; *Ischyrocerus spitzbergensis* Schellenberg 1925.

Type locality: Not traced. Distribution: Beaufort Sea; Iceland; Greenland; Spitsbergen; Norway; depths greater than 90 m.

Ischyrocerus megalops G. O. Sars, 1894.

Type locality: Norway. Distribution: Beaufort Sea; North Atlantic; depth unknown.

Ischyrocerus serratus Gurjanova, 1938.

Type locality: Sea of Japan. Distribution: Aleutian Islands; Sea of Japan; depth unknown.

Jassa borowskyae Conlan, 1990.

Type locality: Brady's Beach, Barkley Sound, Vancouver Island, British Columbia, Canada. Distribution: Eastern North Pacific (Aleutian Islands to southern California); western North Pacific (Peter the Great Bay; Sea of Japan); low intertidal zone to 20 m.

Jassa marmorata Holmes, 1903.

Jassa falcata Chevreaux and Fage 1925.

Type locality: Barren Islands Marina, Brooklyn, New York. Distribution: Eastern North Pacific (Alaska to Baja California, Mexico); western North Pacific; North Atlantic; Australia; New Zealand; low intertidal zone to 30 m.

Jassa oclairi Conlan, 1990.

Type locality: Square Bay, Amchitka Island, Bering Sea, Alaska. Distribution: Pribilof Islands to British Columbia; low intertidal zone to 12 m.

Jassa slatteryi Conlan, 1990.

Type locality: Moss Landing Harbor, Monterey County, California. Distribution: Eastern North Pacific (Alaska to Baja California, Mexico); western North Pacific; eastern North Atlantic (Galapagos Islands); Australia; New Zealand; Chile; Brazil; low intertidal zone to 40 m.

Jassa staudei Conlan, 1990.

Type locality: Barkley Sound, Vancouver Island, British Columbia, Canada. Distribution: Alaska to Morro Bay, California; intertidal zone to 82 m.

Microjassa boreopacifica Conlan, 1995.

Type locality: Port McNeill, Vancouver Island, British Columbia. Distribution: Ogden Passage, Southeast Alaska, to Victoria, British Columbia; intertidal zone to 61 m.

Family Liljeborgiidae

Liljeborgia cota J. L. Barnard, 1962.

Type locality: Southern California. Distribution: Gulf of Alaska to southern California; 366–2000 m.

?Liljeborgia fissicornis (M. Sars, 1858).

Gammarus fissicornis M. Sars 1858; *Iduna fissicornis*: Boeck 1861; *Gammarus pallidus* (*Lilljeborgia*): Goës 1866.

Type locality: Northern Norway. Distribution: ?Beaufort Sea; Norway; Svalbard; Barents Sea; New Siberian Islands; West Greenland; 9–458 m.

Remarks: d'Udekem d'Acoz and Vader (2009) split *Liljeborgia fissicornis* into four species, all restricted to Scandinavian waters. The record of *L. fissicornis* in the western Beaufort Sea (Carey, 1978) might represent *L. polosi* Barnard and Karaman 1991, found in the Canadian Basin of the Arctic Ocean and considered as belonging to the same group as *L. fissicornis*.

Family Lysianassidae

Acidostoma laticorne G. O. Sars, 1879.

Acidostoma laticornis G. O. Sars 1879.

Type locality: Norway. Distribution: Arctic Ocean including western Beaufort Sea and Lofoten Isles; North Atlantic; material at Lofoten Isles collected at 800–1200 m.

Gronella groenlandica (Hansen, 1888).

Anonyx groenlandicus Hansen 1888; *Orchomenella groenlandica* (Hansen 1888); *Orchomene groenlandica* (Hansen 1888).

Type locality: Greenland. Distribution: Beaufort Sea; North Atlantic; depth unknown.

Hippomedon abyssi (Goës, 1866).

Lysianassa abyssi Goës 1866; *Paratryphosites abyssi*: Stebbing 1899.

Type locality: Spitsbergen. Distribution: Beaufort Sea; Greenland; North Atlantic; 183–320 m.

Hippomedon denticulatus (Bate, 1857).

Anonyx denticulata Bate 1857; *Hippomedon holbolli*: Boeck (non Krøyer 1846).

Type locality: Not traced. Distribution: Beaufort Sea; Denmark; Norway; British Isles; France; Mediterranean; intertidal zone to 900 m.

Hippomedon granulosus Bulycheva, 1955.

Type locality: Sea of Japan and Sea of Okhotsk. Distribution: St. Lawrence Island, Bering Sea; western North Pacific; 30–134 m.

Hippomedon holbolli (Kröyer, 1846).

Anonyx holbolli Kröyer 1846.

Type locality: Greenland. Distribution: Beaufort Sea; North Atlantic; depth unknown.

Hippomedon robustus G. O. Sars, 1895.

Type locality: Norway. Distribution: Beaufort Sea; North Atlantic; type material collected at 91 m.

Lepidepecreum eoum Gurjanova, 1938.

Type locality: Japan Sea. Distribution: Beaufort Sea; Japan Sea; depth unknown.

Lepidepecreum serraculum Dalkey, 1998.

Type locality: Santa Monica Bay, California. Distribution: Alaska to Baja California; intertidal zone to 150 m.

Lepidepecreum umbo (Goës, 1866).

Lysianassa umbo Goës 1866; *Anonyx umbo* (Goës 1866); *Orchomene umbo* (Goës 1866).

Type locality: Spitsbergen. Distribution: Beaufort Sea; White Sea; Norway; 55–183 m.

Onisimus affinis Hansen, 1887.

Boeckosimus affinis (Hansen 1887).

Type locality: Greenland. Distribution: Circumpolar Arctic, including Arctic Alaska in the western Beaufort Sea; continental shelf depths.

Onisimus litoralis (Krøyer, 1845).

Anonyx litoralis Krøyer 1845; *Alibrotus litoralis* (Krøyer 1845); *Pseudalibrotus litoralis* (Krøyer 1845).

Type locality: Greenland. Distribution: Beaufort Sea; North Atlantic; depth unknown.

Onisimus normani Sars, 1895.

Boeckosimus normani (Sars 1895).

Type locality: Norway. Distribution: Circumpolar Arctic, including Arctic Alaska in the western Beaufort Sea; 65–670 m.

Onisimus plautus Krøyer, 1845.

Boeckosimus plautus (Krøyer 1845).

Type locality: Not traced. Distribution: Circumpolar Arctic, including the western Beaufort Sea and the Bering Strait; material in the Bering Strait collected at 45 m (Gurjanova, 1962).

Orchomene serratus Boeck, 1861.

Type locality: Norway. Distribution: Beaufort Sea; Russian Arctic; Greenland; Norway; to a depth of 660 m.

Orchomenella minuta (Krøyer, 1846).

Anonyx minutus Krøyer 1846; *Lysianassa minuta* (Krøyer 1846); *Orchomene minuta* (Krøyer 1846); *Tryphosa minuta* (Krøyer 1846).

Type locality: Greenland. Distribution: Arctic Alaska and Canada; North Atlantic; depth unknown.

Orchomenella pacifica (Gurjanova, 1938).

Type locality: Russia. Distribution: Alaska; Russian seas; depth unknown.

Orchomenella pinguis (Boeck, 1861).

Anonyx pinguis Boeck 1861; *Orchomene pinguis*: Boeck 1876, Barnard 1964.

Type locality: Norway. Distribution: Possibly circumpolar; shallow water to a depth of 565 m.

Paratryphosites abyssi (Goës, 1866).

Lysianassa abyssi Goës 1866; *Hippomedon abyssi* (Goës 1866); *Hippomedon stephenseni* Frost 1936.

Type locality: Spitsbergen. Distribution: Arctic Alaska; Arctic Canada; Sea of Japan; Greenland; Nova Scotia; Newfoundland; shallow depths to 528 m.

Paronesimus barentsi Stebbing, 1894.

Onisimus barentsi (Stebbing 1894).

Type locality: Barents Sea. Distribution: Beaufort and Barents seas; North Atlantic; type material collected at 125 m.

Socarnes bidenticulatus (Bate, 1858).

Lysianassa bidenticulatus Bate 1858; *Socarnes ovalis* Hoek 1882; *Socarnes bidenticulatus ochotica* Gurjanova 1962.

Type locality: Distribution: Beaufort Sea; Newfoundland; Greenland; Spitsbergen; Jan Mayen; 7–293 m.

Tryphosella groenlandica Schellenberg, 1935.

Type locality: Not traced. Distribution: Beaufort Sea; depth unknown.

Tryphosella pusilla G. O. Sars, 1879.

Tryphosa pusilla (G. O. Sars 1879).

Type locality: Norway. Distribution: Beaufort Sea; North Atlantic; depth unknown.

Tryphosella rusanovi Goës, 1866.

Centromedon rusanovi (Goës 1866).

Type locality: Spitsbergen. Distribution: Beaufort Sea; North Atlantic; depth unknown.

Tryphosella triangula (Stephensen, 1925).

Tryphosa triangula Stephensen 1925.

Type locality: Iceland. Distribution: Beaufort Sea; Kara Sea; Iceland; 10–326 m.

Wecomedon similis Jarrett and Bousfield, 1982.
Type locality: Lelu Island, North central coastal British Columbia. Distribution: North Bering Sea to the north-central coast of British Columbia; intertidal zone to 29 m.

Wecomedon wecomus (Barnard, 1971).
Type locality: Oregon. Distribution: Southern Alaska to Oregon; littoral zone.

Wecomedon wirketis (Gurjanova, 1962).
Hippomedon wirketis Gurjanova 1962.
Type locality: Okhotsk Sea. Distribution: Northern Bering Sea; Sea of Okhotsk; Sea of Japan; 25–115 m.

Family Melitidae

Abludomelita kodiakensis (J. L. Barnard, 1964).
Melita kodiakensis Barnard 1964.
Type locality: Chogafka Cove, Kodiak Island, Alaska. Distribution: Known only from type locality; depth unknown; rare.

Desdimelita californica (Alderman, 1936).
Melita californica Alderman 1936; *Abludomelita californica*: Karaman 1981.
Type locality: California. Distribution: Aleutian Islands to central California; intertidal to deep subtidal zones.

Desdimelita desdichada (J. L. Barnard, 1962).
Melita desdichada J. L. Barnard 1962; *Abludomelita desdichada*: Karaman 1981.
Type locality: Southern California. Distribution: Southeastern Alaska to Point Conception, California; depths to 120 m.

Desdimelita microdentata Jarrett and Bousfield, 1996.
Type locality: Kalaloch Beach, Washington. Distribution: Southeastern Alaska to central Oregon; intertidal zone to 35 m.

Desdimelita microphthalma Jarrett and Bousfield, 1996.
Type locality: Hogan Island, southeastern Alaska. Distribution: Known only from type locality; intertidal zone; rare.

Maera danae (Stimpson, 1853).
Leptothoe danae Stimpson 1853; *Maera prionochira* Brüggen 1907; *Maera loveni*: Barnard 1962.
Type locality: Grand Manan Island, Canada. Distribution: Subarctic; North Pacific from Point Barrow, Alaska, to San Quintin Bay, Baja California, Mexico; North Atlantic from Grand Manan, New Brunswick, to Newport, Rhode Island; 13–216 m.

Maera fusca (Bate, 1864).
Moera fusca Bate 1864; *Maera dubia* Calman 1898.
Type locality: Esquimalt Harbour, Vancouver Island, British Columbia. Distribution: Point Barrow, Alaska, to Washington; intertidal zone to 18 m.

Maera jerrica Krapp-Schickel and Jarrett, 2000.
Maera inaequipes Barnard 1954.
Type locality: Little Daykoo Island, southeastern Pacific. Distribution: Southeast Alaska, to Oregon; to depths of 135 m.

Maera loveni (Bruzelius, 1859).
Gammarus loveni Bruzelius 1859.
Type locality: Scandinavia. Distribution: Widely distributed in the Arctic; North Atlantic; 20–400 m.

Maera nelsonae Krapp-Schickel and Jarrett, 2000.
Maera loveni: Barnard 1962.
Type locality: Monterey Bay, California. Distribution: Bering Sea to California; 137–200 m.

Megamoera borealis Jarrett and Bousfield, 1996.
Type locality: College Fjord, southeastern Alaska. Distribution: Aleutian Islands and southeastern Alaska to southern British Columbia; to depth of 66 m.

Megamoera bowmani Jarrett and Bousfield, 1996.
Type locality: Mouth of Masset Harbour, Queen Charlotte Islands, British Columbia. Distribution: Southeastern Alaska to British Columbia; to depth of 25 m.

Megamoera dentata (Krøyer, 1842).
Gammarus dentatus Krøyer 1842; *Melita dentata*: Sars 1895.
Type locality: Greenland. Distribution: North Pacific from Point Barrow, Alaska, to Corona Del Mar, California; Japan, Kamchatka. Atlantic, and Arctic oceans including White Sea, Barents Sea, Spitsbergen, Norway, Bohuslän, Kattegat, British Isles, Iceland, Greenland, Labrador, Gulf of St. Lawrence, Newfoundland, Nova Scotia, Bay of Fundy, New England, and Hudson Bay; 30–282 m.

Megamoera glacialis Jarrett and Bousfield, 1996.
Type locality: College Fjord, southeastern Alaska. Distribution: Aleutian Islands, southern Bering Sea, to Prince William Sound, Alaska; intertidal to shallow subtidal zones.

Megamoera kodiakensis (J. L. Barnard, 1964).
Melita kodiakensis J. L. Barnard 1964; *Abludomelita kodiakensis*: Karaman 1981.
Type locality: Kodiak Island, Gulf of Alaska. Distribution: Known only from type locality; bathyal depths; rare.

Megamoera mikulitschae (Gurjanova, 1953).
Melita mikulitschae Gurjanova 1953.

Type locality: Okhotsk Sea. Distribution: Chukchi Sea; Bering Sea; Unimak Island, Aleutian Islands; Okhotsk Sea; littoral to sublittoral depths.

Megamoera rafiae Jarrett and Bousfield, 1996.
Type locality: Scraggy Island, southeastern Alaska. Distribution: Southeastern Alaska; shallow subtidal zone.

Megamoera subtener (Stimpson, 1864).
Gammarus subtener Stimpson 1864; *Abludomelita subtener*: Karaman 1981; non *Melita dentata* (Krøyer): Shoemaker 1955, Barnard 1958, Barnard 1969, Austin 1985, Staude 1987.
Type locality: Puget Sound, Washington. Distribution: Prince William Sound to central California; shallow subtidal zone.

Megamoera unimaki Jarrett and Bousfield, 1996.
Type locality: Unimak Island, Aleutian Islands. Distribution: Known only from the type locality; shallow subtidal zone.

Melita alaskensis Jarrett and Bousfield, 1996.
Type locality: Imperial Passage, western north side of Hogan Island, southeastern Alaska. Distribution: Known only from type locality; intertidal zone; rare.

Melita oregonensis J. L. Barnard, 1954.
Type locality: Oregon. Distribution: Southeastern Alaska to northern California; intertidal zone.

Melitoides makarovi Gurjanova, 1934.
Type locality: Kara Sea. Distribution: Subarctic; littoral zone.

Melitoides valida (Shoemaker, 1955).
Melita valida Shoemaker 1955; *Abludomelita valida*: Karaman 1981.
Type locality: Point Barrow, Alaska. Distribution: Known only from type locality; depth unknown; rare.

?*Quadrimaera vigota* (Barnard, 1969).
Maera vigota Barnard 1969.
Type locality: Cayucos, central California. Distribution: Gulf of Alaska to central California; intertidal zone.
Remarks: Krapp-Schickel and Jarrett (2000) noted that in Alaskan specimens the third uropod rami is longer and narrower than in Californian specimens and also that the rami shows ontogenetic variation.

Quasimelita formosa (Murdoch, 1885).
Melita formosa Murdoch 1885.
Type locality: Arctic Alaska. Distribution: Alaskan, Siberian, and Canadian Arctic; Japan; depths to 480 m.

Quasimelita quadrispinosa (Vosseler, 1889).
Melita quadrispinosa Vosseler 1889.
Type locality: Spitsbergen. Distribution: Chukchi, Bering, and Barents seas; littoral and sublittoral depths.

Wimvadocus torelli (Goës, 1866).
Gammarus torelli Goes 1866; *Ceradocus torelli*: Stebbing 1906.
Type locality: Iceland or Faroe Islands (precise locality not noted). Distribution: Circum-Arctic; south to British Columbia in the eastern North Pacific; 24–500 m.

Family Mesogammaridae

Paramesogammarus americanus Bousfield, 1979.
Type locality: Northwestern side of Hogan Island, Chichagof Island, Southeast Alaska. Distribution: Alexander Archipelago of Southeast Alaska (Baranof and Chichagof Islands); littoral zone.

Family Najnidae

Carinonajna barnardi Bousfield and Marcoux, 2004.
Type locality: Nesto Pt., Graham Island, Queen Charlotte Islands, British Columbia. Distribution: Southeastern Alaska to Oregon; intertidal to shallow subtidal zone.

Carinonajna botanica Bousfield and Marcoux, 2004.
Najna plumulosa Bousfield 1981 (unpublished MS).
Type locality: Southern Vancouver Island, British Columbia. Distribution: Southeastern Alaska and British Columbia; intertidal to shallow subtidal zone.

Carinonajna carli Bousfield and Marcoux, 2004.
Najna setosus Bousfield 1981 (unpublished MS).
Type locality: Botany Beach, Point Renfrew, southern Vancouver Island, British Columbia. Distribution: Southeastern Alaska to Oregon; intertidal to shallow subtidal zone.

Najna amchitkana Bousfield and Marcoux, 2004.
Type locality: Constantine Harbor, Amchitka Island, Aleutian Islands. Distribution: Known only from type locality; intertidal zone; rare.

Najna consiliorum Derzhavin, 1937.
Type locality: Sea of Japan. Distribution: Pacific boreal; littoral zone.

Najna parva Bousfield and Marcoux, 2004.
Type locality: Renard Island, Blying Sound, Resurrection Bay, southeastern Alaska. Distribution: Aleutian Islands and southeastern Alaska to northern British Columbia; intertidal to shallow subtidal zones.

Family Odiidae

Odius carinatus (Bate, 1862).
Otus carinatus Bate 1862.
Type locality: Norway. Distribution: Arctic Alaska; eastern Bering Sea; North Atlantic; 35–200 m.

Odius kelleri Brliggen, 1907.
Type locality: Not traced. Distribution: Beaufort Sea to the Aleutian Islands; Sea of Japan; depth unknown.

Family Oedicerotidae

Acanthostepheia behringiensis (Lockington, 1877).
Oedicerus behringiensis Lockington 1877; *Acanthostepheia pulchra* Miers 1881.
Type locality: West coast of Alaska, north of Bering Strait. Distribution: Widely distributed in the Arctic, probably circumpolar; to a depth of 60 m.

Acanthostepheia malmgreni (Goes, 1866).
Amphithonotus malmgreni Goes 1866.
Type locality: Spitsbergen, Norway. Distribution: Widely distributed in the Arctic; 10–300 m.

Aceroides latipes (G. O. Sars, 1883).
Halicreion latipes Sars 1883; *Aceroides distinguendus* Hansen 1888.
Type locality: Not traced. Distribution: Widely distributed in the Arctic; littoral to bathyal zones.

Americhelidium rectipalmum (Mills, 1962).
Synchelidum rectipalmum Mills 1962.
Type locality: British Columbia. Distribution: Aleutian Islands and southeastern Alaska to Baja California; intertidal zone to 40 m.

Americhelidium setosum Bousfield and Chevrier, 1996.
Type locality: Swanson Bay, British Columbia. Distribution: Sitka, southeastern Alaska to central British Columbia; intertidal zone to 52 m.

Americhelidium shoemakeri (Mills, 1962).
Synchelidium shoemakeri Mills 1962.
Type locality: British Columbia. Distribution: Aleutian Islands and southeastern Alaska to central California; shallow subtidal zone to 70 m.

Arrhinopsis longicornis Stappers, 1911.
Type locality: Còte S de la Nouvelle-Zemble Southern coast of Novaya Zemlya, 70°20′N, 56°35′E. Distribution: Arctic Alaska and Canada; North Atlantic; type material collected at 90 m.

Arrhis luthkei Gurjanova, 1936.
Type locality: Not traced. Distribution: Widely distributed in the Arctic, including the Beaufort Sea; depth unknown.

Arrhis phyllonyx (M. Sars, 1858). Sea piglet.
Leucothoe phyllonyx Sars 1858; *Aceros phyllonyx* (Sars 1858).
Type locality: Norway. Distribution: Circumpolar, including the western Beaufort Sea; 10–1000 m.

Bathymedon obtusifrons (Hansen, 1883).
Halimedon obtusifrons Hansen 1883.
Type locality: Greenland. Distribution: Western Beaufort Sea; North Atlantic; littoral to bathyal zones.

Deflexilodes enigmaticus Bousfield and Chevrier, 1996.
Type locality: Southeastern Alaska (Leo Anchorage). Distribution: Southeastern Alaska to southern British Columbia; 6–50 m.

Deflexilodes similis Bousfield and Chevrier, 1996.
Monoculodes tuberculatus Boeck (in part)?: Gurjanova 1951, Barnard and Karaman 1991.
Type locality: Rat Island, Aleutian Islands. Distribution: Bering Sea to southern British Columbia; 12–30+ m.

Deflexilodes tesselatus (Schneider, 1884).
Monoculodes tesselatus Schneider 1884.
Type locality: Norway. Distribution: Beaufort Sea; North Atlantic; depth unknown.

Deflexilodes tuberculatus (Boeck, 1871).
Monoculodes tuberculatus Boeck 1871.
Type locality: Norway. Distribution: Beaufort Sea; Greenland; Spitsbergen; 91–183 m.

Monoculodes carinatus (Bate, 1857).
Westwoodea carinata Bate 1856 (nomen nudum); *Kroyera carinata* Bate 1857.
Type locality: British Isles. Distribution: Beaufort Sea; France; coast of Bohuslan; Kattegat; depth unknown.

Monoculodes castalskii Gurjanova, 1951.
Type locality: Western North Pacific (Kamchatka). Distribution: Unimak Island, Aleutian Islands; Sea of Japan and Kara Sea; 80–290 m.

Monoculodes diamesus Gurjanova, 1936.
Type locality: Chukchi Sea. Distribution: Chukchi Sea (20–40 m) and British Columbia (bathyal depths).

Monoculodes latimanus (Goes, 1866).
Oediceros latimanus Goes 1866.
Type locality: Spitsbergen. Distribution: Southeastern Alaska to southern end of Vancouver Island; North Atlantic; Arctic; depths to > 60 m.

Monoculodes packardi Boeck, 1871.
Type locality: Norway. Distribution: Beaufort Sea; North Atlantic; 18–183 m.

Monoculopsis longicornis (Boeck, 1871).
Monoculodes longicornis Boeck 1871.
Type locality: Christiania Fjord, Norway. Distribution: High Arctic, extending into the northern Bering Sea and the North Atlantic; subtidally at continental shelf depths.

Oediceros saginatus Krøyer, 1842.
Type locality: Greenland. Distribution: Arctic Alaska

and Canada; Greenland; Spitsbergen; Finnmark; depth unknown.

Pacifoculodes bruneli Bousfield and Chevrier, 1996.

Monoculodes spinipes Mills 1962 (in part)?: Austin 1985, Staude 1987.

Type locality: Taylor Bay, Southeast Alaska. Distribution: Southeastern Alaska, from Prince William Sound south to Cross Sound; found on exposed and semi-protected sand beaches.

Pacifoculodes crassirostris (Hansen, 1887).

Monoculodes crassirostris Hansen 1887.

Type locality: Davis Strait, off Greenland. Distribution: Bering Sea to the Aleutian Islands; North Atlantic; subtidal at continental shelf depths.

Pacifoculodes zernovi (Gurjanova, 1936).

Monoculodes zernovi Gurjanova 1936.

Type locality: Sea of Japan. Distribution: Bering Sea south to southern British Columbia; Sea of Japan; subtidal to depths of 40 m.

Paroediceros lynceus (M. Sars, 1858).

Oediceros lynceus M. Sars 1858; *Paroediceros nubilatus* Packard 1867.

Type locality: Not traced. Distribution: Widely distributed in the Arctic, including the Beaufort Sea; depth unknown.

Paroediceros propinquus (Goës, 1866).

Oediceros propinquus Goës 1866; *Paroediceros microps* G. O. Sars 1883.

Type locality: Spitsbergen. Distribution: Widely distributed in the Arctic Ocean, including the Beaufort Sea; 7–146 m.

Perioculodes longimanus (Bate and Westwood, 1868).

Monoculodes longimanus Bate and Westwood 1868; *Pontocrates longimanus* (Bate and Westwood 1868).

Type locality: British Isles. Distribution: Beaufort Sea; North Atlantic; depth unknown.

Rostroculodes borealis (Boeck, 1871).

Monoculodes borealis Boeck 1871.

Type locality: Norway. Distribution: Beaufort Sea; Kara Sea; Spitsbergen; England; Norway; Finnmark; Greenland; 5–183 m.

Rostroculodes longirostris (Goës, 1866).

Oediceros longirostris Goës 1866; *Monoculodes longirostris* (Goës 1866).

Type locality: Spitsbergen. Distribution: Beaufort Sea; Finnmark; Norway; depth unknown.

Rostroculodes schneideri (G. O. Sars, 1895).

Monoculodes schneideri G. O. Sars 1895.

Type locality: Norway. Distribution: Beaufort and Chukchi seas; White Sea; Kara Sea; Franz Josef Land; Gulf of St. Lawrence; to a depth of 60 m.

Westwoodilla megalops (G. O. Sars, 1882).

Halimedon megalops G. O. Sars 1882; non *Westwoodilla caecula* Bate 1857: Shoemaker 1930 (in part, *W. megalops* + *W. helle*), Dunbar 1954 (in part, *W. megalops* + *W. helle*), Just 1980 (in part, *W. megalops* + *W. helle*).

Type locality: Norway. Distribution: Throughout the Arctic Ocean including the Beaufort and Chukchi Seas; Bering Sea; North Atlantic; 6–294 m.

?***Westwoodilla*** cf. ***oxyrhyncha*** Bulytscheva, 1952.

Type locality: West of Cape Povorotniy, Sea of Japan. Distribution: Sea of Japan; ?Bering Strait; 32–351 m.

Remarks: Jansen (2002) examined specimens of *Westwoodilla* from the Bering Strait (south of Cape Nome, Alaska) that resembled *W. oxyrhyncha*, but mentioned that it might be a new species, with the lack of a thorough description of this species precluding a proper assessment.

Westwoodilla rectangulata Bulytscheva, 1952.

Type locality: Bay of Peter the Great, Sea of Japan. Distribution: Bering Sea and Sea of Japan; 6–51 m.

Family Opisidae

Opisa eschrichtii (Krøyer, 1842).

Opis eschrichti Krøyer 1842.

Type locality: Greenland. Distribution: Circumpolar; Beaufort Sea; Greenland; Iceland; northern Norway; North Sea; Ireland; 30–400 m.

Opisa odontochela Bousfield, 1987.

Type locality: Canada. Distribution: Alaska; Canada; depth unknown.

Family Pardaliscidae

Pardalisca cuspidata Krøyer, 1842.

Type locality: Greenland. Distribution: Beaufort Sea; Greenland; Spitsbergen; Finnmark; intertidal to bathyal zones.

Pardalisca tenuipes G. O. Sars, 1893.

Type locality: Norway. Distribution: Beaufort Sea; North Atlantic; 91–183 m.

Pardaliscella lavrovi Gurjanova, 1934.

Type locality: Not traced. Distribution: Widely distributed in the Arctic, including the Beaufort Sea; Northwest Atlantic; depth unknown.

Pardaliscella malygini Gurjanova, 1936.

Type locality: Not traced. Distribution: Beaufort Sea; depth unknown.

Family Phoxocephalidae

Beringiaphoxus beringianus Jarrett and Bousfield, 1994.

Type locality: Constantine Harbor, Amchitka Island, Bering Sea. Distribution: Amchitka Island, southern Bering Sea; intertidal and shallow subtidal zones; rare.

Eobrolgus chumashi Barnard and Barnard, 1981.
Paraphoxus spinosus J. L. Barnard 1960 (in part).
Type locality: Southern California. Distribution: Aleutian Islands and southeast Alaska to southern California; intertidal zone to 11 m.

Eyakia robusta (Holmes, 1908).
Paraphoxus robustus Holmes 1908.
Type locality: Pt. Loma, California. Distribution: Inner Aleutian Islands to Bahia de San Quintin, Baja California, Mexico; 4–221 m.
Remarks: Associated with the brittle star *Amphiodia urtica* (Barnard, 1960).

Eyakia species 1 sensu Jarrett and Bousfield, 1994.
Eyakia robusta: J. L. and C. M. Barnard 1981.
Distribution: Inner Aleutian Islands through Prince William Sound and southeast Alaska to Friday Harbor, Washington; depth unknown.

Foxiphalus aleuti Barnard and Barnard, 1982.
Type locality: Between Pinnacle and Ulakhla, Unalaska. Distribution: Aleutian Islands to California; 10–29 m.

Foxiphalus obtusidens (Alderman, 1936).
Pontharpinia obtusidens Alderman 1936; *Paraphoxus obtusidens major*: Barnard 1960 (in part, not *P. major*).
Type locality: Moss Beach, California (kelp holdfasts). Distribution: North Pacific, Alaska to California; Kuril Islands, Okhotsk Sea; intertidal zone to 210 m.

Foxiphalus similis (Barnard, 1960).
Paraphoxus similis Barnard 1960.
Type locality: Huntington Beach, California. Distribution: Aleutian Islands to southern California; 30–324 m.
Remarks: Associated with *Rhepoxinius bicuspidatus* (Barnard, 1960) and the brittle star *Amphioda urtica* (see Barnard, 1960).

Foxiphalus slatteryi Jarrett and Bousfield, 1994.
Type locality: Constantine Harbor, Amchitka Island, Aleutian Islands. Distribution: Known only from type locality; subtidal sands; rare.

Foxiphalus xixmeus Barnard and Barnard, 1982.
Type locality: Southern California. Distribution: Alaska and southeast Alaska to southern California; intertidal zone to 20 m.

Grandifoxus acanthinus Coyle, 1982.
Type locality: Southeast Bering Sea. Distribution: Chukchi Sea south to Gulf of Alaska; 22–87 m.

Grandifoxus aciculata Coyle, 1982.
Type locality: Southeast Bering Sea, near Bristol Bay. Distribution: Southeast Bering Sea and Orca Inlet; 29–87 m.

Grandifoxus constantinus Jarrett and Bousfield, 1994.
Type locality: Constantine Harbor, Amchitka Island, Aleutian Islands. Distribution: Known only from type locality; subtidal sands; rare.

Grandifoxus lindbergi (Gurjanova, 1953).
Pontarpinia robusta lindbergi Gurjanova 1953; *Grandifoxus* sp. R.: Barnard 1980; *Pontharpinia lindbergi*: Gurjanova 1980.
Type locality: Iturup Island, Kuril Islands, Sea of Okhotsk. Distribution: Southeastern Bering Sea and southern Alaska; 8–52 m.

Grandifoxus longirostris (Gurjanova, 1938).
Pontarpinia longirostris Gurjanova 1938.
Type locality: Sea of Japan. Distribution: The Sea of Japan east to the Aleutian Islands and Gulf of Alaska, including lower Cook Inlet; 10–90 m.

Grandifoxus nasuta (Gurjanova, 1936).
Pontarpinia nasuta Gurjanova 1936.
Type locality: Northern Bering Sea. Distribution: Chukchi Sea south to Bristol Bay, Alaska; 33–164 m.

Grandifoxus pseudonasutus Jarrett and Bousfield, 1994.
Type locality: Constantine Harbor, Amchitka Island, Aleutian Islands. Distribution: Known only from type locality; near shore; rare.

Grandifoxus vulpinus Coyle, 1982.
Type locality: Near Bristol Bay. Distribution: Northern and southeastern Bering Sea; 10–30 m.

Harpinia mucronata G. O. Sars, 1879.
Type locality: Norway. Distribution: Beaufort Sea; north of Kara and Laptev seas; West and East Greenland; Barents Sea; Denmark Strait; 28–1134 m.

Harpinia pectinata G. O. Sars, 1891.
Harpinia mediterranea Karaman 1973.
Type locality: Norway. Distribution: Beaufort and Bering seas; Kara Sea; British Isles; west coast of France; Mediterranean Sea; 10–2488 m.

Harpinia serrata G. O. Sars, 1879.
Type locality: Norway. Distribution: Chukchi and Beaufort seas; Kara Sea; East Greenland; Jan Mayen; western Atlantic at Cheticamp Island; 17–174 m.

Harpiniopsis gurjanovae Bulycheva 1936.
Harpinia gurjanovae: Feder et al. 2007.
Type locality: St. Lawrence Island, Bering Sea. Distribution: Chukchi and Bering seas; Sea of Okhotsk; 20–25 m.

Harpiniopsis kobjakovae (Bulycheva, 1936).
Harpinia kobjakovae Bulycheva 1936.
Type locality: Not traced. Distribution: Beaufort and Chukchi seas; Bering Sea; Tartar Strait; 53–151 m.

Heterophoxus affinis (Holmes, 1908).
Harpinia affinis Holmes 1908; *Heterophoxus oculatus*: Barnard 1960 [non *Heterophoxus oculatus* (Holmes, 1908)].
Type locality: Monterey Bay, California. Distribution: Southeast Alaska (Sitka) to southern California; depth to 600+ m.

Heterophoxus conlanae Jarrett and Bousfield, 1994.
Type locality: Saanich Inlet, Strait of Georgia, British Columbia, Canada. Distribution: Southeast Alaska (Sitka) to Washington; intertidal zone to 40 m.

Heterophoxus oculatus (Holmes, 1908).
Harpinia oculata Holmes 1908; *Harpinia affinis* Holmes 1908; *Heterophoxus pennatus* Shoemaker 1925; *Heterophoxus oculatus,* forma *nitellus* Barnard 1960.
Type locality: Coronado Island, Mexico. Distribution: Alaska to Bahia Honda, Panama, and Costa Rica; 2–1941 m.

Majoxiphalus major (Barnard, 1960).
Paraphoxus major Barnard 1960; *Foxiphalus major*: Barnard and Barnard 1982, 1991.
Type locality: Not traced. Distribution: Southeastern Alaska to Baja California; subtidal zone to 91 m.

Majoxiphalus maximus Jarrett and Bousfield, 1994.
Type locality: Ahous Bay, Vancouver Island, British Columbia. Distribution: Bering Sea to northern Vancouver Island, British Columbia; intertidal and subtidal zones.

Mandibulophoxus alaskensis Jarrett and Bousfield, 1994.
Type locality: Orca Inlet, Hawkins Island, southeastern Alaska. Distribution: Southeastern Alaska to British Columbia; intertidal to shallow subtidal zones.

Metaphoxus frequens Barnard, 1960.
Type locality: California. Distribution: Southeastern Alaska to southern California; shallow subtidal zone.

Paraphoxus beringiensis Jarrett and Bousfield, 1994.
Type locality: St. Lawrence Island, Bering Sea. Distribution: Known only from type locality; 45 m; rare.

?Paraphoxus oculatus (G. O. Sars, 1879).
Phoxus oculatus G. O. Sars 1879; *Phoxocephalus oculatus*: Stebbing 1888; *Paraphoxus maculatus* Chevreux 1888.
Type locality: Norway. Distribution: ?Circumboreal; 40–800 m.
Remarks: Reports of this species in the North Pacific have not been confirmed (Jarret and Bousfield, 1994).

Paraphoxus pacificus Jarrett and Bousfield, 1994.
Type locality: North of Diana Island, Berkley Sound, Vancouver Island, British Columbia. Distribution: Prince William Sound to southern British Columbia; 20–40 m.

Paraphoxus rugosus Jarrett and Bousfield, 1994.
Type locality: Mouth of the McKenzie River, Beaufort Sea. Distribution: Chukchi and Beaufort seas; depth to 275 m; rare.

Pseudharpinia excavata (Chevreux, 1887).
Harpinia excavata Chevreux 1887; *Harpiniopsis sanpedroensis* Barnard 1960; *Harpiniopsis excavata*: Barnard 1964.
Type locality: Finisterre, Spain. Distribution: Eastern North Pacific, Alaska to southern California; mid Atlantic Ocean off Africa and Europe in deep basins; 363–510 m.

Rhepoxynius daboius (Barnard, 1960).
Paraphoxus daboius Barnard 1960.
Type locality: Santa Catalina Island, California. Distribution: Alaska to southern California coastal slopes; 77–813 m.

Family Pleustidae

Chromopleustes oculatus (Holmes, 1908).
Neopleustes oculatus Holmes 1908; *Parapleustes oculatus*: Barnard and Given 1960.
Type locality: Monterey Bay, California. Distribution: Bering Sea and southeastern Alaska to California; intertidal zone to 20 m.

Eosymtes minutus Bousfield and Hendrycks, 1994.
Type locality: Northeast of St. Lawrence Island, Bering Sea. Distribution: Known only from type locality. 20–33 m; rare.

Kamptopleustes spinosus Hendrycks and Bousfield, 2004.
Type locality: Trevor Channel, southern Vancouver Island, British Columbia. Distribution: Southeast Alaska to southern British Columbia; depths to 80 m.

Neopleustes boecki (Hansen, 1888).
Parapleustes boecki Hansen 1888.
Type locality: Greenland. Distribution: Beaufort Sea; North Atlantic; depth unknown.

Neopleustes columbianus Hendrycks and Bousfield, 2004.
Type locality: Nass River estuary, British Columbia. Distribution: Southeast Alaska to British Columbia; 7.6–71 m.

Neopleustes pulchellus (Krøyer, 1846).
Amphitoe pulchella Krøyer 1846; *Parapleustes pulchellus* (Krøyer 1846); *Paramphithoe pulchella* (Krøyer 1846).
Type locality: Greenland. Distribution: Beaufort Sea;

Greenland; Iceland; Spitsbergen; Norway; Skaggerak; 75–282 m.

Parapleustes americanus Bousfield and Hendrycks, 1995.

?Parapleustes pacifica: Austin 1985, Barnard and Karaman 1991 (in part).

Type locality: Vancouver Island, British Columbia. Distribution: Bering Sea, and Southeast Alaska to southern British Columbia; subtidal to depths of 50 m.

Parapleustes assimilis (G. O. Sars, 1882).

Paramphithoe assimilis Sars 1882; *Neopleustes assimilis*: Stebbing 1906.

Type locality: Norway. Distribution: Widely distributed in the Arctic, including the Beaufort Sea; 20–285 m.

Parapleustes gracilis Buchholz, 1874.

Parapleustes brevicornis G. O. Sars 1883; *Paramphithoe brevicornis* (G. O. Sars 1883).

Type locality: Not traced. Distribution: Beaufort Sea; North Atlantic; depth unknown.

Parapleustes pugettensis (Dana, 1853).

Iphimedia pugettensis Dana 1853; *Parapleustes bairdi* J. L. Barnard 1956; *Incisocalliope newportensis* J. L. Barnard 1959.

Type locality: Puget Sound, Washington. Distribution: Alaska to southern California; intertidal zone to 183 m.

?***Pleustes acutirostris*** Bousfield and Hendrycks, 1994.

?Pleustes panoplus: Shoemaker 1955 (in part).

Type locality: Prince of Wales Strait, Canada, Arctic Ocean. Distribution: Western Canadian Arctic and possibly the Point Barrow region of Alaska; depth unknown.

Pleustes angulatus Shoemaker, 1955.

Pleustes panopla angulata Shoemaker 1955; *Pleustes angulatus angulatus*: Gurjanova 1972.

Type locality: Point Barrow, Alaska. Distribution: Known only from type locality; depth to 7 m; rare.

Pleustes constantinus Bousfield and Hendrycks, 1994.

Type locality: Constantine Harbor, Amchitka Island, Aleutian Islands. Distribution: Aleutian Islands south to British Columbia; depth unknown.

Pleustes lawrencianus Bousfield and Hendrycks, 1994.

Pleustes panoplus tuberculatus Slattery and Oliver 1987.

Type locality: Southeast Cape, St. Lawrence Island, Bering Sea, Alaska. Distribution: Northern Bering Sea, coast of Alaska to St. Lawrence Island, Bering Sea; 6–8 m.

Pleustes panoplus (Krøyer, 1838).

Amphithoe panopla Krøyer 1838; *Amphithonoptus cataphractus* Stimpson 1853; *Pleustes panoplus panoplus* Gurjanova 1972 (in part).

Type locality: Norway. Distribution: ?Holarctic; 5–155 m.

Remarks: Bousfield and Hendrycks (1994) recognized five varieties of this species; two of these varieties occur in the southern Chukchi Sea.

Pleustomesus medius (Goes, 1866).

Paramphithoe media Goes 1866; *Pleustes medius*: Stebbing 1906.

Type locality: Spitsbergen, Norway. Distribution: Circumarctic and subarctic south in the North Pacific to the Sea of Okhotsk and southeastern Alaska; shallow subtidal and continental shelf.

Pleusymtes kariana (Stappers, 1911).

Sympleustes karianus Stappers 1911.

Type locality: Kara Sea, 71°22′N, 56°57′E. Distribution: Beaufort Sea; type material collected at 165 m.

Pleusymtes pacifica Hendrycks and Bousfield, 2004.

Pleusymtes sp. Staude 1996; non *Sympleustes subglaber*: Barnard and Given 1960, Austin 1985; non *Pleutymtes glaber*: Barnard 1969 (in part).

Type locality: Rokok Island, Baranof Island, Southeast Alaska. Distribution: Aleutian Islands and Southeast Alaska to northern British Columbia; shallow subtidal zone to 60 m.

Pleusymtes pribilofensis Hendrycks and Bousfield, 2004.

Type locality: Pribilof Islands, Bering Sea, Alaska. Distribution: Known only from type locality; depth unknown; rare.

?***Pleusymtes uncigera*** (Gurjanova, 1938).

Sympleustes uncigera Gurjanova 1938; non *Sympleustes uncigera*: Shoemaker 1955.

Type locality: Sea of Okhotsk. Distribution: Frederick Sound, Alaska, to British Columbia; Sea of Japan and Sea of Okhotsk; low intertidal and shallow subtidal zones.

?***Pleusymtes*** sp. 2 sensu Hendrycks and Bousfield, 2004.

Distribution: Amchitka Island, Aleutian Islands; rare; depth unknown.

Remarks: Further material needs to be examined in order to determine the status of this species.

Rhinopleustes acuminatus Hendrycks and Bousfield, 2004.

Type locality: Pribilof Islands, Bering Sea. Distribution: Known only from type locality; rare.

Shoemakeroides cornigerus (Shoemaker, 1964).

Sympleustes cornigera Shoemaker 1964; *Stenopleustes cornigera*: Gurjanova 1972; *Parapleustes cornigerus*: Karaman and Barnard 1979, Barnard and Karaman 1991.

Type locality: Western Aleutian Islands. Distribution: Aleutian Islands and Gulf of Alaska, off Kodiak Island; 100–1800 m.

Stenopleustes eldingi Gurjanova, 1930.

Type locality: Not traced. Distribution: Beaufort Sea; depth unknown.

Stenopleustes malmgreni (Boeck, 1871).

Amphithopsis malmgreni Boeck 1871.

Type locality: Norway. Distribution: Beaufort Sea; North Sea; Norway; North Atlantic; 150–282 m.

Thorlaksonius amchitkanus Bousfield and Hendrycks, 1994.

Type locality: Amchitka Island, Alaska. Distribution: Known only from type locality; shallow subtidal zone; rare.

Thorlaksonius borealis Bousfield and Hendrycks, 1994.

?Pleustes platypa Barnard and Given 1960 (in part).

Type locality: Vancouver Island, British Columbia. Distribution: Prince William Sound and southeastern Alaska, through British Columbia to Oregon; depth to 10 m.

Thorlaksonius brevirostris Bousfield and Hendrycks, 1994.

Type locality: Lady Ellen Point, north end of Vancouver Island, British Columbia. Distribution: Southeast Alaska to central California; depth to 35 m.

Thorlaksonius carinatus Bousfield and Hendrycks, 1994.

Type locality: Cape Beale, Vancouver Island, British Columbia. Distribution: Southeastern Alaska and Vancouver Island, British Columbia; depth to 50 m.

Thorlaksonius subcarinatus Bousfield and Hendrycks, 1994.

?Pleustes depressa Barnard 1968 (in part).

Type locality: Telegraph Bay, Cadborough Bay, Vancouver Island, British Columbia. Distribution: Southeastern Alaska to Oregon; depth to 25 m.

Family Podoceridae

Dulichia falcata (Bate, 1857).

Dyopedos falcatus Bate 1857.

Type locality: British Isles. Distribution: Arctic-boreal, including western Beaufort Sea; 20–700 m.

Dulichia rhabdoplastis McCloskey, 1970.

Type locality: San Juan Channel, Washington. Distribution: Prince William Sound to Monterey Bay, California; 3–25 m.

Dulichia tuberculata Boeck, 1870.

Dulichia curticauda Boeck 1870; *Dulichia septentrionalis* G. O. Sars 1879.

Type locality: Not traced. Distribution: Widely distributed in the Arctic, including western Beaufort Sea; depth unknown.

Dulichiopsis abyssi (Stephensen, 1944).

Dulichia abyssi Stephensen 1944.

Type locality: Greenland. Distribution: Western Beaufort Sea; Greenland; depth unknown.

Dulichiopsis remis (J. L. Barnard, 1964).

Dulichia remis J. L. Barnard, 1964.

Type locality: Near Islands, Alaska. Distribution: Alaska to Oregon; type material collected at 881 m.

Dyopedos arcticus (Murdoch, 1885).

Dulichia arctica Murdoch 1885.

Type locality: Point Barrow, Alaska. Distribution: Circum-Arctic including Bering Sea, Baffin Island, Labrador, Gulf of St. Lawrence, Grand Manan, Bay of Fundy, Cape Cod; Pacific from Point Barrow, Alaska, to southern California; 9–410 m.

?***Dyopedos bispinis*** (Gurjanova, 1930).

Dulichia bispina Gurjanova 1930.

Type locality: Not traced. Distribution: ?Alaska; depth unknown.

Dyopedos monacanthus (Metzger, 1875).

Dulichia monacanthus Metzger 1875.

Type locality: Skagerrak. Distribution: Arctic Ocean, ?Chukchi Sea, ?northern California and North Atlantic including Iceland, Gulf of St. Lawrence, Bay of Fundy, Cape Cod, British Isles, Denmark, Norway, Skagerrak and Kattegat; 12–217 m.

Remarks: Often found clinging to algae, hydroids, and bryozoans.

?***Dyopedos unispinus*** (Gurjanova, 1951).

Dulichia unispina Gurjanova 1951.

Type locality: Russia. Distribution: ?Alaska; Russian seas; depth unknown.

Paradulichia typica Boeck, 1871.

Paradulichia spinifera Gurjanova 1946.

Type locality: Norway. Distribution: Widely distributed in the Arctic Ocean; to a depth of about 50 m.

Family Pontogeneiidae

Paramoera bousfieldi Staude, 1995.

"Undescribed species near *Paramoera mohri*": Staude et al. 1977.

Type locality: Indian Beach, San Juan Island, Washington. Distribution: Southeast Alaska to northern Oregon; intertidal zone.

Paramoera bucki Staude, 1955.

Type locality: Deadman Bay, Washington. Distribution: Southeast Alaska to San Juan Islands; intertidal to shallow subtidal zones.

Paramoera carlottensis Bousfield, 1958.

Type locality: Stiu Pt., Graham Island, British Columbia. Distribution: ?Southern Alaska to British Columbia; intertidal zone.

Paramoera columbiana Bousfield, 1958.
Type locality: Gray Bay, Moresby Island, British Columbia. Distribution: West to Amchitka Island and from the Pribilof Islands to central Puget Sound, Washington; intertidal and shallow subtidal zones.

Paramoera crassicauda Staude, 1995.
Type locality: Steamer Bay, Etolin Island, Southeast Alaska. Distribution: Known only from type locality; intertidal zone; rare.

Paramoera suchaneki Staude, 1995.
Paramoera mohri Barnard 1969.
Type locality: Tatoosh Island, Washington. Distribution: Southeast Alaska to northern California; intertidal zone.

Family Pontoporeiidae

Monoporeia affinis (Lindström, 1855).
Pontoporeia affinis Lindström 1855.
Type locality: Not traced. Distribution: Beaufort Sea; depth unknown.

Pontoporeia femorata Kröyer, 1842.
Pontoporeia furcigera Bruzelius 1859; *Pontoporeia sinuata* Ekman 1913; *Pontoporeia ekmani* Bulycheva 1936.
Type locality: Norway. Distribution: Widely distributed in the Arctic Ocean; in the eastern North Pacific south to southern Alaska; littoral zone to depths of 200 m.

Priscillina armata (Boeck, 1861).
Pontoporeia armata Boeck 1861.
Type locality: Greenland. Distribution: Chukchi and Beaufort seas; North Atlantic; depth unknown.

Family Scopelocheiridae

Paracallisoma coecum (Holmes, 1908).
Scopelocheirus caecus Holmes 1908.
Type locality: San Clemente Island, California. Distribution: Southern Alaska to California; type material was collected at 1196–1287 m.

Family Stegocephalidae

Alania beringi (Berge and Vader, 2001)
Stegocephalus beringi Berge and Vader 2001; *Phippsiella similis* Oldevig 1959 (in part).
Type locality: Bering Island (Komandorskiy Islands). Distribution: Chukchi and Bering seas; type locality collected at 117 m.

Stegocephalus inflatus Krøyer, 1842.
Stegocephalus ampulla: Boeck and others (non Phipps 1774).
Type locality: Greenland. Distribution: Circum-Arctic; 150–274 m; common.

Family Stenothoidae

Hardametopa carinata (Hansen, 1887).
Metopa carinata Hansen 1887; *Metopella carinata* (Hansen 1887).
Type locality: Greenland. Distribution: Beaufort Sea; Greenland; North Sea; North Atlantic; to a depth of 115 m.

Hardametopa nasuta (Boeck, 1871).
Metopa nasuta Boeck 1871; *Metopella nasuta* (Boeck 1871).
Type locality: Norway. Distribution: Chukchi and Beaufort seas; Norway; Denmark; Iceland; Greenland; Gulf of St. Lawrence; Scotland; 10–250 m.

Mesometopa gibbosa Shoemaker, 1955.
Type locality: Beaufort Sea, Point Barrow, Alaska. Distribution: Known only from the type locality; 6–50 m.

Mesometopa neglecta (Hansen, 1888).
Metopa neglecta Hansen 1888, Stebbing 1906; *Metopella neglecta* Sars 1892, Stephensen 1931.
Type locality: Greenland. Distribution: Beaufort Sea, Alaska; Greenland; Norway; Franz Josef Land; 12–115 m.

Metopa bruzelii (Goës, 1866).
Montagua bruzelii Goës 1866; *Proboloides bruzelii* (Goës 1866).
Type locality: Spitsbergen. Distribution: Arctic Alaska and Canada; Gulf of St. Lawrence; Greenland; Iceland; Norway; North Wales; 10–200 m.

Metopa clypeata (Krøyer, 1842).
Leucothoe clypeata Krøyer 1842; *Montagua clypeata* (Krøyer 1842).
Type locality: Greenland. Distribution: Arctic Alaska; Gulf of St. Lawrence; Greenland; depths to 300 m.

Metopa glacialis (Krøyer, 1842).
Leucothoe glacialis Krøyer 1842; *Proboloides glacialis* (Krøyer 1842); *Stenothoe clypeata* Krøyer 1842; *Metopa cariana* Gurjanova 1929.
Type locality: Greenland. Distribution: Beaufort and Bering seas; North Atlantic; littoral zone.

Metopa longicornis Boeck, 1871.
Type locality: Norway. Distribution: Beaufort and Chukchi seas; Greenland; North Atlantic; 10–130 m.

Metopa propinqua G. O. Sars, 1892.
Type locality: Norway. Distribution: Chukchi Sea; Barents Sea; North Atlantic; North Sea; 50–153 m.

Metopa robusta G. O. Sars, 1892.
Type locality: Norway. Distribution: Beaufort Sea; North Atlantic; littoral to bathyal zones.

Metopa spinicoxa Shoemaker, 1955.

Type locality: Point Barrow, Alaska. Distribution: Arctic Alaska; western Atlantic; type material collected at 53 m.

Metopa tenuimana G. O. Sars, 1892.

Type locality: Norway. Distribution: Beaufort Sea; Shetland; East Greenland; depths to 40 m.

Metopella longimana (Boeck, 1871).

Metopa longimana Boeck 1871.

Type locality: Norway. Distribution: Chukchi and Beaufort seas; Greeland; Norway; Denmark; North Sea; North Atlantic; to a depth of 115 m.

Metopelloides stephenseni Gurjanova, 1938.

Type locality: Sea of Japan. Distribution: Beaufort Sea, Alaska; Sea of Japan; 35–90 m.

Metopelloides tattersalli Gurjanova, 1938.

Type locality: Sea of Japan. Distribution: Beaufort Sea, Alaska; Sea of Japan; 62–104 m.

Pycnopyge carinatum (Shoemaker, 1955).

Prothaumatelson carinatum Shoemaker 1955.

Type locality: Point Barrow, Alaska. Distribution: Known only from type locality; 37 m; rare.

Stenothoe barrowensis Shoemaker, 1955.

Type locality: Beaufort Sea, Point Barrow, Alaska. Distribution: Known only from the type locality; 104 m.

Stenothoides angusta Shoemaker, 1955.

Type locality: Beaufort Sea, Point Barrow, Alaska. Distribution: Known only from the type locality; 56 m.

Zaikometopa erythrophthalmus (Coyle and Mueller, 1981).

Metopelloides erythrophthalmus Coyle and Mueller 1981.

Type locality: Sud Island, Alaska. Distribution: Southeastern Bering and the Gulf of Alaska; intertidal zone.

Family Stilipedidae

Stilipes distinctus Holmes, 1908.

Type locality: San Nicolas Island, California. Distribution: Bering Sea to southern California; 395–620 m.

Family Synopiidae

Bruzelia tuberculata G. O. Sars, 1882.

Type locality: Norway. Distribution: Circumboreal, extending south to California in the eastern North Pacific; Norwegian populations collected at 146–550 m.

Syrrhoe crenulata Goës, 1866.

Type locality: Spitsbergen. Distribution: Arctic Ocean; Bering Sea to southern California; western North Pacific; North Atlantic; 10–300 m.

Tiron biocellata J. L. Barnard, 1962.

Type locality: California. Distribution: Southern Alaska to California; depth unknown.

Remarks: The unpublished record of this species in Alaska was identified by Aaron Baldwin.[11]

Tiron spiniferus (Stimpson, 1853).

Lysianassa spinifera Stimpson 1853; *Tiron acanthurus* Liljeborg 1865; *Tessarops hastatus* Norman 1868; *Tiron spiniferum*: Shoemaker 1955.

Type locality: Bay of Fundy. Distribution: Beaufort Sea; Sea of Japan; Greenland; Iceland; Norway; Skagerrak; Northumberland; North Atlantic; 30–900 m.

Family Talitridae

Megalorchestia californiana (Brandt, 1851). California or long-horned beach hopper.

Orchestoidea californiana Brandt 1851.

Type locality: California. Distribution: Southern Alaska to central California; high intertidal zone.

Megalorchestia columbiana (Bousfield, 1958). Pale beach hopper.

Orchestoidea columbiana Bousfield 1958.

Type locality: Long Beach, Wickaninnish Bay, Vancouver Island, British Columbia. Distribution: Southern Alaska to central California; high intertidal zone.

Megalorchestia pugettensis (Dana, 1853).

Orchestoidea pugettensis Dana 1853; *Talorchestia tridentata* Stebbing 1899 (male).

Type locality: Puget Sound, Washington. Distribution: Southern Alaska to central California; high intertidal zone.

Traskorchestia ochotensis (Brandt, 1851).

Orchestia ochotensis Brandt 1851.

Type locality: Okhotsk Sea. Distribution: Southern Alaska; western North Pacific; high intertidal zone.

Traskorchestia traskiana (Stimpson, 1857). Splash-zone beach hopper.

Orchestia traskiana Stimpson 1857.

Type locality: California. Distribution: Aleutian Islands and southern Alaska to Baja California, Mexico; high intertidal zone.

Family Uristidae

Anonyx barrowensis Steele, 1982.

Type locality: Point Barrow, Alaska. Distribution: Known only from type locality; depth unknown; rare.

Anonyx beringi Steele, 1982.

Type locality: Kiska Harbor, Aleutian Islands. Distribution: Bering Sea; Gulf of Alaska; 16–22 m.

Anonyx compactus Gurjanova, 1962.

Type locality: Steele and Brunel (1968a) were unable to discover whether type-specimens of *Anonyx compactus* have been designated. Several localities in the Okhotsk Sea and elsewhere were given by Gurjanova (1962), so the type locality is not known. Distribution: Bering Sea; Arctic Alaska and Canada; North Atlantic; littoral to bathyal depths.

Anonyx dalli Steele, 1983.

Type locality: Kiska Harbor, Aleutian Islands. Distribution: Southwestern Bering Sea; Aleutian Islands; 10–13 m.

?***Anonyx debruyni*** Hoek, 1882.

Chironesimus debruynii: Sars 1891; *Anonyx debruyni debruyni*: Gurjanova 1962 (in part) (non *A. debruyni orientalis* Gurjanova 1962).

Type locality: Barents Sea. Distribution: Western Beaufort Sea; Barents Sea; Gulf of St. Lawrence to Cape Cod; littoral to bathyal zones.

Remarks: Carey (1978) recorded this species in the western Beaufort Sea. Steele and Brunel (1968a) stated that the distribution of this species is uncertain because published records need confirmation.

Anonyx epistomicus Kudrjaschov, 1965.

Type locality: Sea of Okhotsk. Distribution: Aleutian Islands; Sea of Okhotsk; depth unknown.

Anonyx gurjanovae Steele, 1986.

Type locality: St. Lawrence Island, Alaska. Distribution: Sea of Japan to southern British Columbia; type material collected at 8 m.

?***Anonyx hurleyi*** Steele, 1986.

Type locality: San Juan Islands, Washington State. Distribution: ?Southern Alaska to Washington State; shallow depths.

Anonyx laticoxae Gurjanova, 1962.

Type locality: Not traced. Distribution: Chukchi Sea to West Greenland; Spitsbergen; Kara Sea; depth unknown.

Remarks: Steele (1986) stated that this species might be circumpolar, but presently there are large gaps in its distribution.

Anonyx lebedi Gurjanova, 1962.

Anonyx lilljeborgi lebedi Gurjanova 1962.

Type locality: Sea of Japan. Distribution: Beaufort Sea; Gulf of Alaska; Sea of Japan; depth unknown.

Anonyx lilljeborgi Boeck, 1870.

Lakota carinata Holmes 1908.

Type locality: Haugesund, Norway. Distribution: Circum-boreal; Arctic Ocean south to Bering Sea in North Pacific; North Atlantic; 113–132 m.

Anonyx makarovi Gurjanova, 1962.

Anonyx pacificus Just 1970.

Type locality: Sea of Japan. Distribution: Laptev Sea to eastern North America south to Nova Scotia banks; as far south as Japan in the western North Pacific; depth unknown.

Anonyx multiarticulatus (Pearse, 1913).

Chironesimus multiarticulatus Pearse 1913.

Type locality: St. Paul Island, Bering Sea. Distribution: North Pacific; depth unknown.

Anonyx nugax (Phipps, 1774).

Cancer nugax Phipps 1774; *Atylus nugax* (Phipps 1774); *Gammarus nugax* (Phipps 1774); *Talitrus nugax* (Phipps 1774); *Anonyx appendiculosus* (Krøyer 1838); *Lysianassa appendiculosa* Krøyer 1838; *Lysianassa lagena* Krøyer 1838; *Lysianassa appendiculata* Milne-Edwards 1840; *Anonyx ampulloides* Bate 1862; *Anonyx lagena* Bate 1862; *Lysianassa fisheri* Lockington 1877; *Anonyx kukenthali* Vosseler 1889.

Type locality: West of Moffen Island, Spitsbergen. Distribution: Circum-Arctic; Bering Strait and Bering Sea; Greenland; Spitsbergen; Iceland; Arctic America; Barents Sea; Kara Sea; Siberian Polar Sea; intertidal zone to 1203 m.

Anonyx ochoticus Gurjanova, 1962.

Type locality: Not traced. Distribution: Bering Sea; Aleutian Islands; western North Atlantic; European waters; littoral to bathyal depths.

Anonyx pacificus Gurjanova, 1962.

Anonyx nugax pacificus Gurjanova 1962.

Type locality: Sea of Japan. Distribution: Point Barrow and Bering Strait to the Kamchatka Peninsula; Sea of Okhotsk; material from Point Barrow collected at 11 m (Steele and Brunel, 1968b).

Anonyx petersoni Steele, 1986.

Type locality: St. Paul Island, Bering Sea. Distribution: Widely distributed in the North Pacific Ocean; depth unknown.

Anonyx sarsi Steele and Brunel, 1968.

Anonyx pallidus Bate 1862; *Anonyx lagena* Schneider 1884; *Anonyx nugax* Sars 1891.

Type locality: Matamek River, Quebec. Distribution: Circumpolar, including the Chukchi Sea; 0–50 m.

Anonyx schefferi Steele, 1986.

Type locality: Unimak Island, Aleutian Islands. Distribution: Between the Sea of Japan and the Bering Sea; type material collected at 75 m.

Anonyx sculptifer Gurjanova, 1962.

Type locality: Sea of Japan. Distribution: Gulf of Alaska; Sea of Japan; depth unknown.

Anonyx shoemakeri Steele, 1983.

Type locality: Presumably in the Aleutian Islands. Distribution: Aleutian Islands; depth unknown.

?***Centromedon pumilus*** (Lilljeborg, 1865).

Anonyx pumilus Lilljeborg 1865.

Type locality: Norway. Distribution: Arctic and boreal (probably circumpolar); depth unknown.

Koroga megalops Holmes, 1908.

Type locality: Funter Bay, Lynn Canal, Alaska. Distribution: Known only from type locality; 640 m; rare.

Kiska dalli Shoemaker, 1964.

Type locality: Kiska Island, western Aleutian Islands. Distribution: Aleutian Islands; 10–15 m.

Onisimus affinis Hansen, 1887.

Boeckosimus affinis (Hansen 1887).

Type locality: Greenland. Distribution: Circumpolar Arctic, including Arctic Alaska in the western Beaufort Sea; continental shelf depths.

Onisimus barentsi (Stebbing, 1894).

Paronesimus barentsi Stebbing 1894.

Type locality: Barents Sea. Distribution: Beaufort and Barents seas; North Atlantic; type material collected at 125 m.

Onisimus birulai (Gurjanova, 1929).

Pseudalibrotus birulai Gurjanova 1929.

Type locality: Russian Arctic. Distribution: Beaufort Sea, Alaska; Russian Arctic; 6–22 m.

Onisimus litoralis (Krøyer, 1845).

Anonyx litoralis Krøyer 1845; *Alibrotus litoralis* (Krøyer 1845); *Pseudalibrotus litoralis* (Krøyer 1845).

Type locality: Greenland. Distribution: Beaufort Sea; North Atlantic; depth unknown.

Onisimus normani G. O. Sars, 1895.

Boeckosimus normani (Sars 1895).

Type locality: Norway. Distribution: Circumpolar Arctic, including Arctic Alaska in the western Beaufort Sea; 65–670 m.

Onisimus plautus Krøyer, 1845.

Boeckosimus plautus (Krøyer 1845).

Type locality: Not traced. Distribution: Circumpolar Arctic, including the western Beaufort Sea and the Bering Strait; material in the Bering Strait collected at 45 m (Gurjanova, 1962).

Paralibrotus setosus Stephensen, 1923.

Type locality: West Greenland. Distribution: Beaufort Sea; North Atlantic; depth unknown.

Tmetonyx cicada (O. Fabricius, 1780).

Oniscus cicada Fabricius 1780; *Anonyx gulosus* Krøyer 1845; *Tmetonyx norvegicus* Liljeborg 1852; *Tmetonyx bruzelii* Boeck 1861; *Anonyx cicada*: Stebbing 1888; *Hoplonyx cicada*: Sars 1891.

Type locality: Greenland. Distribution: Circumpolar-boreal; 50–3200 m.

Family Urothoidae

?***Urothoe denticulata*** Gurjanova, 1951.

Type locality: Russian seas. Distribution: ?Alaska; Russian seas; depth unknown.

Family Vitjazianidae

Vitjaziana gurjanovae Birstein and M. Vinogradov, 1955.

Type locality: Kuril-Kamchatka Trench. Distribution: Aleutian and Kuril-Kamchatka trenches; deep water.

Suborder Caprellidea

Infraorder Caprellida

Family Caprellidae

Caprella alaskana Mayer, 1903.

Type locality: Not cited, probably Alaska. Distribution: Aleutian Islands and southern Alaska to British Columbia; littoral zone.

Caprella borealis Mayer, 1903.

Caprella acutifrons var. *borealis* Mayer 1903; *Caprella alaskensis*: Holmes 1904.

Type locality: Cape Lopatka, Kamchatka Peninsula, Russia. Distribution: Prince William Sound; British Columbia; Kamchatka Peninsula; Akkeshi Bay, Japan; intertidal zone.

Caprella carina Mayer, 1903.

Type locality: Kara Sea (Russian Arctic). Distribution: Arctic circumpolar; 4–43 m.

Caprella drepanochir Mayer, 1890.

Type locality: Not cited, probably China. Distribution: Chukchi Sea, southern Prince William Sound, Aleutian Islands, Eschscholtz Bay, and Port Clarence, Alaska; Vladyvostok and Bering Island, Russia; Akkeshi Bay, Japan; intertidal zone.

Caprella ferrea Mayer, 1903.

Metacaprella ferrea: Dougherty and Steinberg 1953.

Type locality: Humboldt Bay, California. Distribution: Alexander Archipelago, Alaska, to southern California; depth unknown.

Caprella gracilior Mayer, 1903.

Caprella linearis var. *gracilior* Mayer 1903.

Type locality: Not cited, probably Alaska. Distribution: Pribilof Islands to southern California; sublittoral zone.

Caprella incisa Mayer, 1903.

Caprella acutifrons var. *incisa* Mayer 1903.

Type locality: Not cited (somewhere in California). Distribution: Alexander Archipelago, Alaska, to California; intertidal zone.

Caprella irregularis Mayer, 1890.

Type locality: Not cited, probably off Korea. Distribution: Aleutian Islands and southern Alaska to Puget Sound, Washington; intertidal to shallow subtidal zones.

Caprella laeviuscula Mayer, 1903.

Type locality: Not cited, Pacific coast of North America. Distribution: Aleutian Islands and southern Alaska to southern California; Akkeshi Bay, Japan; intertidal and shallow subtidal zones.

Caprella linearis (Linnaeus, 1767).

Cancer linearis Linnaeus 1767; *Squilla lobata* Müller.

Type locality: Norway. Distribution: Widepread boreal Arctic circumpolar; 20–950 m.

Caprella mutica Schurin, 1935. Japanese skeleton shrimp.

Caprella macho Platvoet, de Bruyne and Gmelig Meyling 1995.

Type locality: Eastern North Asia, near Japan. Distribution: Gulf of Alaska to southern California; western Europe; New Zealand; intertidal to shallow subtidal zones.

Remarks: This species is invasive in the eastern North Pacific (Frey et al., 2009) and was recently discovered in Alaska (Ashton et al., 2008).

Caprella pustulata Laubitz, 1970.

Type locality: Gudal Bay, Graham Island, Queen Charlotte Islands, British Columbia. Distribution: Prince William Sound and Canoe Bay, Alaska, to Oregon; intertidal zone.

Caprella rudiuscula Laubitz, 1970.

Type locality: Gudal Bay, Graham Island, Queen Charlotte Islands, British Columbia. Distribution: Alexander Archipelago, Icy Bay, and Yakutat Bay, Alaska, to British Columbia; intertidal zone.

Caprella septentrionalis Krøyer, 1838.

Caprella loveni; *Caprella monocera* (Sars); *Caprella punctata* (Boeck).

Type locality: Greenland. Distribution: Widespread boreal Arctic; littoral and upper sublittoral zones to depths of 30 m.

Caprella striata Mayer, 1903.

Type locality: Not cited, Alaska. Distribution: Chukchi and Beaufort seas; Aleutian Islands and southeastern Alaska to British Columbia; 7–150 m.

Metacaprella anomala (Mayer, 1903).

Caprella anomala Mayer 1903.

Type locality: Pacific Grove, California. Distribution: Southeast Alaska to southern California; Japan; intertidal to 100 m.

Metacaprella horrida (G. O. Sars, 1877).

Caprella horrida G. O. Sars 1877.

Type locality: Norway. Distribution: Arctic circumpolar; 43–1359 m.

Metacaprella kennerlyi (Stimpson, 1864).

Caprella kennerlyi Stimpson 1864.

Type locality: Puget Sound, Washington. Distribution: Aleutian Islands and southern Alaska to Santa Barbara, California; littoral zone.

Family Paracercopidae

Cercops compactus Laubitz, 1970.

Type locality: Puffin Bay, Baranof Island, Alaska. Distribution: Puffin Bay south to Oregon; intertidal zone.

Cercops dentatus Vassilenko, 1972.

Type locality: Siberia. Distribution: Pacific high boreal, including the Chukchi Sea and Point Barrow, Alaska, to British Columbia; 28–239 m.

Cercops holboelli Krøyer, 1843.

Type locality: Greenland. Distribution: Pacific-western Atlantic boreal Arctic, including the Chukchi Sea and Point Barrow, Alaska, to California; 33–109 m.

Family Pariambidae

Deutella californica Mayer, 1890.

Type locality: Cape Mendocino, California. Distribution: Prince William Sound to southern California; depth to 109 m.

Family Phtiscidae

Perotripus brevis (La Follette, 1915).

Paedaridium breve La Follette 1915.

Type locality: Laguna Beach, California. Distribution: Prince William Sound to southern California; depth to 109 m.

Family Protellidae

Mayerella banksia Laubitz, 1970.

Type locality: Rennison Island, British Columbia. Distribution: Southern Alaska to southern California; depth to 145 m.

Tritella pilimana Mayer, 1890.

Type locality: Mendocino, California. Distribution: Chukchi Sea to California (north of Point Conception); depth to 195 m.

Infraorder Cyamida

Family Cyamidae

Cyamus boopis Lütken, 1870.

Paracyamus boopis: Sars 1895; *Cyamus suffusus* Dall 1872; *Cyamus elongatus* Hiro 1938.

Type locality: Not traced. Distribution: Alaska to central California; North Atlantic; depth unknown; apparently host specific to the humpback whale.

Cyamus ceti (Linnaeus, 1758).
Oniscus ceti Linnaeus 1758; *Cyamus mysticeti* Lütken 1860.
Type locality: On whales ("*in* Balaenis"). Distribution: Alaska to Baja California, Mexico; Northern Atlantic; depth unknown; parasitic on the bowhead (*Balaena mysticetus*) and gray whales.

Cyamus kessleri Brandt, 1872.
Type locality: Not traced. Distribution: Alaska to Baja California, Mexico; depth unknown; parasitic on the gray whale.

Cyamus monodontis Lütken, 1870.
Type locality: Greenland. Distribution: Arctic Ocean and northern Bering Sea; western North Atlantic; parasitic on the beluga whale (*Delphinapterus leucas*).

Cyamus ovalis Roussel de Vauzème, 1834.
Cyamus tentator Dall 1874.
Type locality: Not traced. Distribution: Southern Alaska; western North Pacific; South Pacific; Atlantic. Parasitic on the northern right whale (*Eubalaena glacialis*).

Cyamus scammoni Dall, 1872.
Type locality: California. Distribution: Alaska to California; parasitic on the gray whale.

Neocyamus physeteris (Pouchet, 1888).
Cyamus physeteris Pouchet 1888.
Type locality: Taken from two whales, one that died in 1874 near Anacona, Spain, and another found by an observer from Pico Island in the Azores. Distribution: Southern Alaska to British Columbia; parasitic on the sperm whale (*Physeter macrocephalus*) and Dall's porpoise (*Phocoenoides dalli*).

Suborder Hyperiidea

Infraorder Physosomata

Family Lanceolidae

?***Lanceola clausii*** Bovallius, 1885.
Type locality: Baffin Bay. Distribution: Panoceanic, including the Chukchi Sea; 200–3000 m.

Lanceola loveni loveni Bovallius, 1885.
Lanceola aestiva Stebbing 1888 (in part).
Type locality: Mouth of the Davis Strait. Distribution: Northern, tropical, and southern regions of the Pacific and Atlantic oceans and tropical regions of the Indian Ocean; the northernmost occurrence has been reported from the Davis Strait and the Bering Sea; 500–4000 m.

Lanceola serrata Bovallius, 1885.
Lanceola suhmi Stebbing 1888.
Type locality: Mouth of the Davis Strait. Distribution: Circum-boreal; Bering Sea; Sea of Okhotsk; North Atlantic; rarely found in the tropical regions of the Indian Ocean; 300–2000 m.

Family Proscinidae

Proscina birsteini Vinogradov, 1956.
Type locality: Bering Sea. Distribution: Known only from the Bering Sea. 500–1500 m.

Family Scinidae

Scina borealis (G. O. Sars, 1882).
Clydonia borealis G. O. Sars 1882; *Tyro borealis*: Bovallius 1887.
Type locality: Norway. Distribution: Panoceanic (temperate, cold-water, tropical); in the Arctic Basin it is found at 80° N; 50–3000 m (most numerous at 200–1000 m); common.

Scina pusilla Chevreux, 1919.
Type locality: Between the Azore and the Canary islands, Monaco Basin, 31°46′N, 25°00′W. Distribution: Occasional reports from the Chukchi Sea and waters of the Canadian Arctic; eastern North Atlantic; Antarctic Ocean; 500–1000 m; rare.

Infraorder Physocephalata

Family Cystisomatidae

Cystisoma pellucidum (Willemoes-Suhm, 1873).
Thaumops pellucida Willemoes-Suhm 1873.
Type locality: Cape St. Vincent. Distribution: ?Southern Alaska to southern California; Atlantic; Indian Ocean; Indo-West Pacific; Tasmania; type material collected at 1993 m.

Family Hyperiidae

Hyperia galba (Montagu, 1815).
Cancer gammarus Montagu 1815.
Type locality: Devonshire, England. Distribution: Arctic-boreal; in the Pacific it penetrates to the coasts of Hokkaido along the western coast and up to Alaska and Kodiak along the eastern coast; far-neritic.

Hyperia medusarum (O. F. Müller, 1776).
Cancer medusarum O. F. Müller 1776; *Hyperia latreillei* Milne-Edwards 1840; *Hyperia hystrix* Bovallius 1889.
Type locality: Greenland. Distribution: Bipolar; in the Pacific it is common up to 30°N along the American coast; 0–300 m.

Hyperia spinigera Bovallius, 1889.
Hyperia antarctica Spandl 1927.
Type locality: The Arctic region: Spitsbergen, off the northern coast of Norway. The Northern temperate

region: Off the south coast of England. Distribution: Eastern North Pacific (Bering Sea south to California); South Pacific (South Island, New Zealand); North Atlantic (Iceland, southern Greenland, Newfoundland), tropical Atlantic (Bermuda Islands, Antilles, Gulf of Guinea), and southern (up to 50°S) Atlantic; Indian Ocean coastal regions of South Africa; Indian Ocean sector of the Antarctic; 25–2000 m.

Hyperoche medusarum (Krøyer, 1838).

Metoecus medusarum Krøyer 1838; *Metoecus abyssorum* Boeck 1870; *Hyperoche luetkeni* Bovallius 1889; *Hyperoche kroeyeri* Sars 1895.

Type locality: Greenland. Distribution: Bipolar; North Pacific in Bering Sea and coastal regions of Alaska; Okhotsk and Japan seas and the Kuril-Kamchatka region; North Atlantic south to La-Mancha, western Ireland, and Labrador; Southern Hemisphere in the South Georgia Islands; cold coastal waters of southwest Africa and off the southern tip of New Zealand; shallow water.

Themisto abyssorum (Boeck, 1870).

Parathemisto abyssorum Boeck 1870; *Themisto oblivia* Bovallius 1889.

Type locality: Christiania and Hardanger fjords, Norway. Distribution: Arctic seas and Central Polar Basin; does not penetrate farther south than the Bering Strait in the North Pacific; in North Atlantic to Gulf of Maine and Bay of Biscay; mainly in the upper 100 m.

Themisto libellula (Lichenstein, 1822).

Gammarus libellula Lichenstein 1822; *Parathemisto libellula* (Lichenstein 1822); *Euthemisto libellula:* Bovallius 1889.

Type locality: Greenland. Distribution: Circumpolar; in the North Pacific south to Bering and Okhotsk seas; in the North Atlantic to Gulf of St. Lawrence and coasts of Newfoundland in the west and to Iceland and Nordkapp in the east; mainly in the upper 100 m but have been found at depths to 1000 m; common.

Themisto pacifica (Stebbing, 1888).

Parathemisto pacifica Stebbing 1888; *Parathemisto oblivia*: Holmes 1904; *Parathemisto abyssorum*: Shoemaker 1930 (non Boeck 1870); *Parathemisto japonica*: Vinogradov 1956 (in part).

Type locality: Between Japan and the Hawaiian Islands at 35°20′N, 153°39′E. Distribution: Subarctic waters of the northern part of the Pacific Ocean and the Bering Sea; mainly in the upper 200 m.

Family Phronimidae

Phronima sedentaria (Forsskål, 1775).

Cancer sedentaria Forsskål 1775; *Gammarus sedentaria*: Schousboe 1802; *Phronima custos* Risso 1816; *Phronima atlantica*: White 1847 (non Guerin-Meneville 1836); *Phronima borneensis* Bate 1862; *Phronima novaezealandiae* Powell 1875; *Phronima neozelanica* Thomson and Chilton 1886; *Phronima spinosa* Bovallius 1887; *Phronima tenella* Stebbing 1888; *Phronima affinis* Vosseler 1901.

Type locality: Not traced. Distribution: Bering Sea; Gulf of Alaska; south of New Zealand; south of Iceland; tropics and subtropics of the three oceans and in the Mediterranean Sea; depth unknown.

Family Phrosinidae

Primno macropa Guerin-Meneville, 1836.

Primno menevillei Stebbing 1888; *Primno Antarctica* Stebbing 1888.

Type locality: Not specified. Distribution: Bering Sea; Gulf of Alaska to northern California; Sea of Japan; Okhotsk Sea; Atlantic; Antarctic; south of Australia; New Zealand; Chile; depth unknown.

Order Cumacea—The Hooded Shrimps

The cumaceans (hooded shrimps) are a group of small peracarid crustaceans, with approximately 1523 extant species worldwide (Ahyong et al., 2011) and 38 species occurring in Alaskan waters (Table 1). Most species inhabit the surface layer of the sediments and are presumed to be deposit feeders, while other species are thought to be filter feeders and micropredators. The higher classification largely follows Martin and Davis (2001). Several sources of primary and secondary literature were used to compile the information for the list of cumaceans: Calman (1912), Hart (1930, 1939), Zimmer (1936, 1943), Given (1965), Lie (1969), Watling (1991), Gerken (2005, 2009), the Cumacea world database (Watling, 2005), the Peracarid interactive database (Anderson, 2011), and Akiyama and Gerken (2012).

Family Bodotriidae

Vaunthompsonia pacifica Zimmer, 1943.

Type locality: Kodiak, Alaska. Distribution: Known only from type locality and Kamchatka, Japan; depths to 96 m; rare.

Family Diastylidae

Brachydiastylis resima (Krøyer, 1846).

Cuma resima Krøyer 1846; *Diastylopsis resima* (Krøyer 1846).

Type locality: Greenland. Distribution: Arctic-boreal; Chukchi Sea; western North Pacific; North Sea; Bering, Barents, White, and Okhotsk seas; Norway; Baltic Straits; Scotland; Greenland; Atlantic shores of North America; 5–350 m.

Diastylis alaskensis Calman, 1912.

Type locality: Bering Sea, just north of the Aleutian Islands (55°06′N; 163°28′W). Distribution: Chukchi Sea;

Bering Sea to Washington; ?western North Pacific; 13–110 m; common.

Diastylis aspera Calman, 1912.
Type locality: Shahafka Cove, Kodiak, Alaska. Distribution: Southern Alaska; Okhotsk Sea; 50–137 m.

Diastylis bidentata Calman, 1912.
Type locality: Kiska Harbor, Kiska Island, Aleutian Islands. Distribution: Chukchi and Bering seas to Washington; western North Pacific; 10–166 m; common.

Diastylis dalli Calman, 1912.
Type locality: Bering Strait. Distribution: Arctic Alaska and Canada south to Bering Strait; Sakhalin Island, Russia; 24–146 m.

Diastylis nucella Calman, 1912.
Type locality: Cape Smyth, Barrow, Alaska. Distribution: Arctic Alaska; type material collected in 5 m.

Diastylis paraspinulosa Zimmer, 1926.
Type locality: Western Bering Sea. Distribution: Chukchi and Bering seas to southern California; 98–120 m.

Diastylis rathkei (Krøyer, 1841).
Cuma rathkii Krøyer 1841.
Type locality: Greenland. Distribution: Circumpolar; Arctic Ocean to southern Alaska; North Atlantic; 9–913 m.

Diastylis sulcata Calman, 1912.
Type locality: Bering Sea (63°37′N, 165°19′W), Alaska. Distribution: Known only from type locality; 22 m; rare.

Diastylopsis dawsoni Smith, 1879.
Type locality: Queen Charlotte Islands, British Columbia, Canada. Distribution: Alaska to southern California; 13–57 m.

Ektonodiastylis robusta Gerken, Watling, and Klitgaard, 2000.
Type locality: Foxe Basin, Repulse Bay (66°28′N, 86°16′W). Distribution: Greenland; Arctic Canada and Alaska (Beaufort and Chukchi seas); 20–200 m.

Family Lampropidae

Lamprops affinis Lomakina, 1958.
Lamprops fuscata: Calman 1912 (in part).
Type locality: Okhotsk Sea. Distribution: Alaska; Bering Sea; Japan; Okhotsk Sea; Russia; 8–90 m.

Lamprops augustinensis Gerken, 2005.
Type locality: Augustine Island, Cook Inlet, Alaska. Distribution: Known only from the type locality; 1 m.

Lamprops beringi Calman, 1912.
Type locality: Bering Island, Kamchatka. Distribution: Bering Sea; 0–129 m.

Lamprops carinata Hart, 1930.
Type locality: Berry Point, Vancouver Island, British Columbia, Canada. Distribution: Bering Sea to southern California; 25–120 m.

Lamprops fasciata G. O. Sars, 1863.
Type locality: Norway. Distribution: St. Paul Island, Pribilof Islands, Alaska; southern Barents Sea; White Sea; Baltic and North seas; shores of Norway and Great Britain; to a depth of 70 m.

Lamprops fuscata G. O. Sars, 1865.
Type locality: Atlantic coast of Arctic Europe. Distribution: Bering Sea to British Columbia; western North Pacific; North Atlantic; depth unknown.

Lamprops quadriplicata S. I. Smith, 1879.
Type locality: Gloucester Harbor, Massachusetts. Distribution: Amphiboreal; Bering Sea to southern California; western North Pacific; North Atlantic; 13–67 m.

Lamprops sarsi Derzhavin, 1926.
Type locality: Kamchatka, Russia. Distribution: Alaska; Bering Sea; Japan; Okhotsk Sea; to a depth of 120 m.

Family Leuconidae

Eudorella emarginata (Krøyer, 1846).
Leucon emarginatus Krøyer 1846.
Type locality: Atlantic coast of northern Europe (Scandinavia). Distribution: Chukchi and Bering seas to British Columbia; western North Pacific; North Atlantic; 13–435 m.

Eudorella groenlandica Zimmer, 1926.
Type locality: Greenland. Distribution: Alaskan and Canadian Arctic; North Atlantic; type material collected at 216 m.

Eudorella pacifica Hart, 1930.
Eudorella tridentata Hart 1930.
Type locality: Deep Cove, Vancouver Island, British Columbia, Canada. Distribution: Bering Strait to southern California; 120 m.

Eudorellopsis biplicata Calman, 1912.
Type locality: St. Pierre Bank, southern Newfoundland, Northwest Atlantic. Distribution: Alaskan and Canadian Arctic (Beaufort and Chukchi seas); Bering Sea; Northwest Atlantic; 20–2500 m.

Eudorellopsis deformis (Krøyer, 1846).
Leucon deformis Krøyer 1846; *Eudora deformis*: Sars 1865; *Eudorella* (?) *deformis*: Sars 1871; *Eudorella deformis*: Meinert 1877.
Type locality: South Greenland. Distribution: Beaufort, Chukchi, and Bering seas; North Atlantic; Faroes Island; 0–271 m.

?***Eudorellopsis derzhavini*** Lomakina, 1952.
Type locality: Kamchatka. Distribution: Chukchi Sea;

eastern Bering Sea; Japan and Okhotsk seas; Kamchatka; 29–390 m.

Remarks: The Chukchi Sea record has not been confirmed.

Eudorellopsis integra (S. I. Smith, 1879).

Eudorella integra S. I. Smith 1879.

Type locality: Halifax, Nova Scotia. Distribution: Bering Sea to Washington; western North Pacific; North Atlantic; 70–201 m.

Leucon fulvus G. O. Sars, 1865.

Type locality: Atlantic coast of northern Europe. Distribution: Southern Alaska to British Columbia, Canada; to depths of 120 m.

Leucon nasica (Krøyer, 1841).

Cuma nasica Krøyer 1841.

Type locality: Greenland. Distribution: Arctic-boreal, both sides of the Atlantic in colder water and extending into the Arctic from Alaska; 10–500 m.

Leucon nasicoides Lilljeborg, 1855.

Type locality: Eastern North Atlantic. Distribution: Arctic-boreal; Chukchi Sea; Norton Sound; White and Okhotsk seas; Kamchatka; European waters; Canadian Arctic; depth unknown.

Leucon profundus Hansen, 1920.

Type locality: Davis Strait. Distribution: Norton Sound; Arctic Ocean; Siberia; Davis Strait; European waters; Mediterranean Sea; collected at 23 m in Norton Sound (Given, 1965) and is found in much deeper water in the Arctic (to 2702 m).

Family Nannastacidae

Campylaspis rubicunda (Lilljeborg, 1855).

Cuma rubicunda Lilljeborg 1855.

Type locality: Kullaberg in Scania, southwest of Sweden. Distribution: Widespread in the Arctic; 9–2857 m.

Cumella alaskensis Gerken, 2009.

Type locality: Old Harbor, Kodiak Island, Alaska. Distribution: Prince William Sound and Kodiak Island, Alaska; intertidal zone to 15 m.

Cumella bruinensis Gerken, 2005.

Type locality: Bruin Bay, Cook Inlet, Alaska. Distribution: Bruin Bay and Seward Harbor, Resurrection Bay, Alaska; 1–4 m.

Cumella carinata (Hansen, 1887).

Campylaspis carinata Hansen 1887; *Cumellopsis carinata*: Calman 1905; *Cumella (Cumella) carinata*: Watling 1991.

Type locality: Disco, Nordfjord. Distribution: Arctic and Bering Sea; off coast of Canada; West Greenland; depths to 163 m.

Cumella oculata Gerken, 2009.

Type locality: Knight Island, Prince William Sound. Distribution: Prince William Sound and Kodiak Island, Alaska; 1–10 m.

Cumella vulgaris Hart, 1930.

Type locality: Port Renfrew, Parry Bay, and Brockton Point, British Columbia. Distribution: Southern Alaska to southern California; depth unknown.

Family Pseudocumatidae

Petalosarsia declivis (G. O. Sars, 1865).

Petalopus declivis Sars 1865; *Petalomera declivis*: Sars 1883.

Type locality: Norway. Distribution: North Atlantic boreal and Arctic, including North Alaska (Point Barrow); Sea of Okhotsk; Sea of Japan; Kamchatka; western North Canada; Detroit de Davis; Iceland; Scandinavia; Spitsbergen; Beloe Moe; Novaya Zemlya; 18–472 m.

Remarks: This species shows morphological variation throughout its range and may represent a species complex (Akiyama and Gerken, 2012).

Order Tanaidacea—The Tanaidaceans

Tanaidaceans are a poorly known group of small (averaging 2–5 mm in length) peracarid crustaceans. Most of the 1000+ species live at depths exceeding 200 m, and, in some deepwater environments, Tanaidacea are the most diverse and abundant members of the fauna present. In shallow water, populations can reach high densities, often exceeding 10,000 individuals/m^2. Despite evidence of their ecological importance, especially as prey items, tanaidaceans have been neglected in most ecological surveys, and, when included, are identified only at the ordinal level.

Approximately 38 species occur in Alaskan waters (Table 1), most needing redescription and revision. Many more species likely remain to be discovered. Geographic ranges are also poorly known and documented. The higher classification follows the Tanaidacea Web Page (Drumm et al., 2006) and Kakui et al. (2011). Several sources of primary and secondary literature were used to compile the information for the list of tanaidaceans: Lang (1957), Menzies and Mohr (1962), Kudinova-Pasternak (1973), Heard (2002), and the peracarid interactive database (Anderson, 2011).

Suborder Apseudomorpha

Family Apseudidae

Carpoapseudes serratispinosus Lang, 1968.

Type locality: Acapulco-Panama transect. Distribution: Southern Alaska to central America (Panama); 235–3610 m.

Fageapseudes bicornis (Kudinova-Pasternak, 1973).

Apseudes bicornis Kudinova-Pasternak 1973; *Collossella bicornis* (Kudinova-Pasternak 1973).

Type locality: Sea of Okhotsk. Distribution Gulf of Alaska; west of Kuril Islands; 3250–5423 m.

Fageapseudes vitjazi (Kudinova-Pasternak, 1970).
Apseudes vitjazi Kudinova-Pasternak 1970.
Type locality: Eastern North Pacific (46°13′N, 153°16′E). Distribution: Eastern North Pacific; Kuril Islands; 4860–5418 m.

Leviapseudes zenkevitchi (Kudinova-Pasternak, 1966).
Apseudes zenkevitchi Kudinova-Pasternak 1966; *Leiopus zenkevitchi*: Lang 1968.
Type locality: Central North Pacific Ocean. Distribution: North Pacific Ocean; Kermadek; ?Caribbean Sea; 1067–6065 m.

Family Sphyrapodidae

Pseudosphyrapus anomalus (G. O. Sars, 1869).
Apseudes anomalus Sars 1869; *Sphyrapus anomalus*: Sars 1882; *Apseudes (Sphyrapus) anomalus*: Gerstaecker and Ortmann 1901.
Type locality: Holmestrand, Norway. Distribution: Widespread in cold northern seas; 7–2223 m.
Remarks: There are no published records in Alaska but this species has been found in the Arctic Ocean off northern Alaska (Heard[12]).

Suborder Tanaidomorpha

Superfamily Tanaoidea

Family Tanaidae

Arctotanais alascensis (Richardson, 1899).
Tanais alascensis Richardson 1899.
Type locality: Kiska Harbor. Distribution: Aleutian Islands and Kuril Islands; 15–350 m.

Superfamily Neotanaoidea

Family Neotanaidae

?***Neotanais barfoedi*** Wolff, 1956.
Type locality: North of New Zealand and southwest of the Kermedec Trench. Distribution: Gulf of Alaska (Kudinova-Pasternak, 1973); South Pacific; 2470–3300 m.

?***Neotanais laevispinosus*** (Norman and Stebbing, 1886).
Leptochelia elegans Norman 1886 (*nomen nudum*); *Alaotanais laevispinosus* Norman and Stebbing 1886; *Alaotanais serratispinosus* Norman and Stebbing 1886; *Neotanais Edwardsi* Dollfus 1898 (in part); *Neotanais laevispinosus*: Nierstrasz 1913; *Neotanais edwardsi*: Nierstrasz 1913 (in part); *Neotanais serratispinosus* (male): Lang 1956; *Neotanais serratispinosus*: Kudinova-Pasternak 1973.
Type locality: Valentia, southwest of Ireland. Distribution: ?Gulf of Alaska (Kudinova-Pasternak, 1973); south of Greenland; Bay of Biscay; 677–3145 m.

Neotanais triangulocephalus Kudinova-Pasternak, 1973.
Type locality: Eastern North Pacific south of the Aleutian Islands. Distribution: Known only from type locality; 3282–4267 m; rare.

Neotanais zenkevitchi Kudinova-Pasternak, 1973.
Type locality: Southeast Alaska (56°13′N, 139°43′E). Distribution: Southeast Alaska; South Pacific (off South America); 3640–4100 m.

Superfamily Paratanaoidea

Family Agathotanaidae

Agathotanais splendidus Kudinova-Pasternak, 1970.
Type locality: Southern Gulf of Alaska. Distribution: Southern Gulf of Alaska; western North Pacific; 5441 m.

Paragathotanais zevinae (Kudinova-Pasternak, 1970).
Paranarhrura zevinae Kudinova-Pasternak 1970.
Type locality: Southern Gulf of Alaska. Distribution: Southern Gulf of Alaska; western North Pacific; 3620–5240 m.

Paranarthrura insignis Hansen, 1913.
Type locality: Davis Strait. Distribution: Gulf of Alaska; Aleutian Trench; ?northern Gulf of Mexico; Angola; Caribbean; North Feni Ridge; Porcupine Seabight; Celtic Slope; north and south Bay of Biscay; ?350–5000 m.

Paranarthrura vitjazi Kudinova-Pasternak, 1970.
Type locality: Kuril-Kamchatka Trench (45°22′N, 154°00′E). Distribution: South of Unimak Island, Aleutian Islands, Kuril-Kamchatka Trench; 3080–5762 m.

Family Akanthophoreidae

?***Akanthophoreus gracilis*** (Krøyer, 1842).
Tanais gracilis Krøyer 1842; *Tanais islandicus* Sars 1877 (in part); *Leptognathia gracilis* (Krøyer 1842): Sars 1882, ?Kudinova-Pasternak 1970, 1976, 1984, Lang 1957; *Leptognathia longiremis* (Lilljeborg 1864): G.O. Sars 1896 (non *longiremis sensu* Lilljeborg 1864); *Tanais (Leptognathia) gracilis*: Gerstaecker and Ortmann 1901; *Leptognathia Sarsii* Hansen 1901: Hansen 1909; *Leptognathia sarsi* Richardson 1905; *Leptognathia hanseni* Vanhöffen 1907; *Leptognathia islandicus*: Hansen 1913; *Leptognathia Sarsi* var. *obtusata* Hansen 1913; *Leptognathia breviremis* Fee 1927; *Leptognathia sarsii*: Crawford 1937; *Leptognathia sarsi* var. *obtusata*: Lang 1957; *Paraleptognathia gracilis*: Guerrero-Kommritz 2004.
Type locality: Spitsbergen. Distribution: ?Cosmopolitan or ?Circum-Arctic; Point Barrow, Alaska; North Pacific; Greenland; Iceland; Faroes up to Norway; 5–?7219 m.
Remarks: See Bird (2007) for a discussion of the

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[12] Heard, R. W. 2012. Personal commun. Gulf Coast Research Laboratory, University of Southern Mississippi, Ocean Springs, MS 39564.

problems of the nomenclature and distributional records of this species. There are doubtful records of this species from southern Alaska to California at the California Academy of Sciences (senior author, personal observ.). The "true" *gracilis* appears to be a North Atlantic-Arctic species. Lang (1957) redescribed this species from Baie des Chaleurs in the NW Atlantic, Iceland, and Point Barrow, Alaska, and noted the variation within and between populations. Molecular analyses will help determine whether these variable populations consist of multiple species or a true polytypic species.

?***Chauliopleona armata*** (Hansen, 1913).

Leptognathia armata Hansen 1913: Kudinova-Pasternak 1970, 1984 (uncertain synonymies).

Type locality: South of Cape Farewell, Greenland (NW Atlantic). Distribution: ?North Pacific; Central Pacific; Chile; South and North Reni Ridge; Rockall Trough; Porcupine Seabight; Celtic Slope; South Biscay Slope; Biscay Abyssal Plain; Seine Abyssal Plain; South Atlantic; ?100–8006 m.

Remarks: North Pacific records of this species might be referable to other undescribed species (Bird, 2007). The Arctic *Chauliopleona hastata* (Hansen 1913) has been erroneously synonymized with this species (Bird, 2007). One species, *C. dentata* Dorjiri and Sieg 1997, was recently decribed from California. The senior author is currently examining a species of *Chauliopleona* that was collected off Southeast Alaska and it appears to be a new species, however only one specimen was available for study. More specimens will need to be examined before its status is resolved.

?***Paraleptognathia bisetulosa*** Dojiri and Sieg, 1997.

Type locality: Purisima Point, Santa Maria Basin, California. Distribution: ?Beaufort Sea (Alaska); Santa Maria Basin, California; ?10–410 m.

Remarks: A specimen examined from the Beaufort Sea in Alaska looks very similar to the incompletely described species *P. bisetulosa* (senior author, personal observ.). More material will need to be examined and compared to topotypic material before a proper assessment can be made.

Family Colletteidae

Collettea cylindrata (G. O. Sars, 1882).

Strongylura cylindrata Sars 1882.

Type locality: Western coast of Norway. Distribution: ?Cosmopolitan, North Pacific (see Bird[13]); 40–6710 m.

Collettea larviformis (Kudinova-Pasternak, 1973).

Strongylura larviformis Kudinova-Pasternak 1973.

Type locality: South of Unimak Island, Aleutian Islands. Distribution: Known only from type locality; 5000 m; rare.

Filitanais moskalevi Kudinova-Pasternak, 1973.

Type locality: Eastern Gulf of Alaska (56°14′N, 139°44′W). Distribution: Known only from type locality. 3450 m; rare.

?***Tumidochelia dentifera*** (G. O. Sars, 1899).

Leptognathia dentifera Sars 1899; *Leptognathia dentata*: Hansen 1913 (lapsus calami).

Type locality: Christiana Fjord, Norway. Distribution: ?North Pacific south of the Aleutian Islands; Norway; 60–6225 m.

Family Cryptocopidae

Cryptocopoides arcticus (Hansen, 1887).

Cryptocope arctica Hansen 1887; *Tanais (Cryptocope) arctica*: Gerstaecker and Ortmann 1901; *Cryptocope antarctica* Vanhöffen 1914.

Type locality: Kara Sea. Distribution: ?Bipolar; eastern North Pacific south of the Aleutian Islands; North Atlantic; Antarctica; 18–6770 m.

Family Leptognathiidae

Leptognathia zezinae Kudinova-Pasternak, 1973.

Type locality: Gulf of Alaska. Distribution: Southern Alaska; eastern North Atlantic; south of Iceland; 1600–4632 m.

Family Pseudotanaidae

?***Pseudotanais affinis*** Hansen, 1886.

?*Pseudotanais inflatus* Kudinova-Pasternak 1973.

Type locality: Kara Sea. Distribution: Southern Alaska; Davis Strait; Iceland; Greenland; North Sea; Norwegian Sea; 40–6890 m.

Pseudotanais forcipatus (Lilljeborg, 1864).

Tanais forcipatus Lilljeborg 1864; *Paratanais forcipatus*: Meinert 1877; *Pseudotanais lilljeborgi* Hansen 1913; Just 1970 (in part).

Type locality: Nord-Koster, Sweden or Molde, Norway. Distribution: Arctic Ocean; Gulf of Alaska; Iceland; Greenland; Norway; British Isles; Skagerak and Kattegat; Oresund; Franz Josef Land; 0–420 m.

Pseudotanais inflatus Kudinova-Pasternak, 1973.

Type locality: Southern Alaska (Gulf of Alaska). Distribution: Known only from type locality; 3610 m; rare.

Remarks: This species has been synonymized with *P. affinis,* but a re-examination is necessary before conclusive statements on its status can be made (Bird and Holdich, 1989).

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[13] Bird, G. 2001. Tanaidacea of the Atlantic margin: The AFEN surveys of 1996 and 1998. Unpublished report to the Atlantic Frontier Environmental Network and UK Offshore Oil Association, February 2001, 90 p.

Pseudotanais vitjazi Kudinova-Pasternak, 1966.
Type locality: Central North Pacific. Distribution: North Pacific; 4260–7370 m.

Family Tanaellidae

?Araphura brevimanus (Lilljeborg, 1864).
Tanais brevimanus Lilljeborg 1864; *Leptognathia brevimana*: Sars 1882; *Leptognathia brevimanus*: Meinert 1890.
Type locality: Nord-Koster, Sweden, or Molde, Norway. Distribution: ?Southern and Southeast Alaska (Kudinova-Pasternak, 1973); Sweden; Cullercoats; West Shetland Shelf; Hebrides Slope; Celtic Slope; Italy; 17–6145 m.

Araphura rectifrons (Kudinova-Pasternak, 1973).
Leptognathia rectifrons Kudinova-Pasternak 1973.
Type locality: Near Sitka, Southeast Alaska. Distribution: Southeast Alaska; 563–770 m.

Arthrura shiinoi Kudinova-Pasternak, 1973.
Type locality: Southeast Alaska. Distribution: Known only from type locality; 3450 m; rare.

?Tanaella forcifera (Lang, 1968).
Leptognathia forcifera Lang 1968.
Type locality: Acapulco-Panama transect. Distribution: Southern and Southeast Alaska (Kudinova-Pasternak, 1973) and the type locality; 180–3570 m.

Family Typhlotanaidae

Peraeospinosus magnificus (Kudinova-Pasternak, 1970).
Typhlotanais magnificus Kudinova-Pasternak 1970.
Type locality: Eastern North Pacific south of Gulf of Alaska. Distribution: North Pacific (Alaska, California, Japan); Japan Trench; South Atlantic (Argentina); West Antarctic (Bransfield Strait); 1170–5255 m.

Peraeospinosus rectus (Kudinova-Pasternak, 1966).
Typhlotanais rectus Kudinova-Pasternak 1966.
Type locality: Middle of the North Pacific Ocean (40°19.7′N, 175°45.3′E). Distribution: North Pacific: Kuril-Kamchatka and Japan trenches); West Antarctic; 3610–7370 m.

Torquella angularis (Kudinova-Pasternak, 1966).
Typhlotanais angularis Kudinova-Pasternak 1966.
Type locality: Central North Pacific (40°19.7′N, 175°45.3′E). Distribution: Eastern North and central North Pacific; 5473–6065 m.

?Torquella grandis (Hansen, 1913).
Typhlotanais grandis Hansen 1913.
Type locality: Iceland Basin. Distribution: Gulf of Alaska; western North Pacific; Iceland; 1499–6135 m.
Remarks: Blazewicz-Paszkowycz (2007) doubted that *T. grandis* is distributed in the North Pacific. Unfortunately, comparison between the North Pacific and North Atlantic populations is presently impossible because North Pacific material is unavailable for study.

?Typhlamia mucronata (Hansen, 1913).
Typhlotanais mucronatus Hansen 1913.
Type locality: Eastern North Atlantic off Iceland. Distribution: ?North Pacific, including Southeast Alaska; North Atlantic: Iceland; south of Jan Mayen; Bay of Biscay; 1618–6710 m.

Typhlotanais compactus Kudinova-Pasternak, 1966.
Type locality: Central North Pacific Ocean. Distribution: North Pacific Ocean, including the Gulf of Alaska; 1550–6135 m.
Remarks: This species was included in the "non classified" group of *Typhlotanais sensu lato* by Blazewicz-Paszkowycz (2007). There appears to be a species of *Typhlotanais* new to science in the Chukchi Sea morphologically similar to *T. mixtus* Hansen 1913 (senior author, personal observ.).

Family incertae sedis

Leptognathia zenkevitchi Kudinova-Pasternak, 1970.
Type locality: North Pacific (45°17′N, 155°23′E). Distribution: South of Unimak Island (Aleutian Islands); Kuril-Kamchatka Trench; 1550–4945 m.
Remarks: This species was removed from the family Leptognathiidae because it has broad mandibular molars (Larsen and Shimomura, 2007).

Order Isopoda—The Isopods

About 10,661 species of isopods are known worldwide (Ahyong et al., 2011). The isopods are a diverse group of peracarid crustaceans with approximately 90 species occurring in Alaskan waters (Table 1). The majority of species are less than a centimeter in length and include herbivores, omnivores, scavengers, obligate and temporary parasites, and micropredators. Members of the family Aegidae infrequently attach to fish hosts, and only long enough to feed. Those in the family Cymothoidae are exclusively ectoparasites on marine, freshwater, and brackish-water fishes. Members of the family Bopyridae are ectoparasites of other crustaceans, with juveniles sometimes using copepods as intermediate hosts. The higher classification largely follows Martin and Davis (2001). Several sources of primary and secondary literature were used to compile the information for the list of isopods: Benedict (1898), Richardson (1904, 1905a,b, 1909), Boone (1920), Menzies and Mohr (1962), Menzies and Miller (1972), Kussakin (1982, 1988), Mezhov (1986), Korczynski et al. (1989), Rafi and Laubitz (1990), Brusca et al. (2001), Poore (2001), and Espinosa-Perez and Hendrickx (2001, 2006). The "World List of Marine, Freshwater and Terrestrial Isopod Crustaceans" is available online (Schotte et al., 1995 onwards).

Suborder Asellota

Family Janiridae

Ianiropsis derjugini Gurjanova, 1933.

Type locality: Bering Sea. Distribution: Aleutian Islands and Alaska south to central California; Commander Islands and northern and southern Kuril Islands; Japan and Okhotsk seas from southern Primorye and southwest Sakhalin to Nagaev Bay; intertidal zone to 15 m.

Ianiropsis kincaidi H. Richardson, 1904.

Ianiropsis pugettensis Hatch 1947.

Type locality: Yakutat, Alaska. Distribution: Bering Sea to Monterey County, California; Commander Islands; eastern Kamchatka; Kuril Islands; Sea of Japan: Primorye and southwestern Sakhalin; intertidal zone to 69 m.

Janiralata erostrata (H. Richardson, 1899).

Ianthe erostrata Richardson 1899; *Iolella erostrata*: Richardson 1905.

Type locality: Chichagof Harbor, Attu, Aleutian Islands. Distribution: Pacific boreal; western part of the Aleutian Islands; eastern coast of Kamchatka; Commander Islands; southeast from Paramushir (Kuril Islands to Urup); intertidal zone to 230 m.

Janiralata holmesi (H. Richardson, 1905).

Tole holmesi Richardson 1905; *Iolella holmesi*: Richardson 1905.

Type locality: Stephens Passage, southeastern Alaska. Distribution: Southeastern Alaska; 75–344 m.

Janiralata sarsi (Richardson, 1905).

Lolella sarsi Richardson 1905.

Type locality: Alaska. Distribution: North Pacific; Bering Sea north of the Aleutian Islands; Amchitka Island; near Kuril Islands; 15–60 m.

Janiralata solasteri (Hatch, 1947).

Janira solasteri Hatch 1947.

Type locality: Washington. Distribution: Southeast Alaska to southern California; 50–295 m.

Janiralata tricornis (Krøyer, 1847).

Henopomus tricornis Krøyer 1847.

Type locality: North Atlantic. Distribution: Western sector of the Arctic; eastern sector of the Arctic: Chukchi Sea; Point Barrow; Bering Strait; Pacific Ocean: southwestern Bering Sea from east of Medny Island to near Bering Island, Pacific and southern coasts of Paramushir Island; 6–1540 m.

Family Desmosomatidae

Chelibranchus canaliculatus Mezhov, 1986.

Type locality: Gulf of Alaska (57°52′N, 149°02′W). Distribution: Known only from type locality; 1190 m; rare.

Eugerda kamtschatica Kussakin, 1965.

Type locality: Sea of Okhotsk. Distribution: Gulf of Alaska; Okhotsk Sea; 87–290 m.

Eugerdella minutula Mezhov, 1986.

Type locality: Gulf of Alaska (57°36′N, 148°36′W). Distribution: Known only from type locality; 3240–3300 m; rare.

Eugerdella ordinaria Mezhov, 1986.

Type locality: Gulf of Alaska (53°43′N, 163°38′W). Distribution: Known only from type locality; 1550 m; rare.

Mirabilicoxa richardsoni Mezhov, 1986.

Type locality: Gulf of Alaska (57°36′N, 148°36′W). Distribution: Known only from type locality; 3240–3300 m; rare.

Prochelator kussakini Mezhov, 1986.

Type locality: Gulf of Alaska (59°18′N, 141°58′W). Distribution: Known only from type locality; 290 m; rare.

Family Munnidae

Munna stephenseni Gurjanova, 1933

Type locality: Bering Sea. Distribution: Bering Sea to central California; intertidal zone to 30 m.

Family Munnopsidae

Munnopsurus giganteus (G. O. Sars, 1877).

Eurycope giganteus Sars 1877; *Munnopsurus arcticus* Richardson 1912.

Type locality: Norway. Distribution: Chukchi, Beaufort, and Bering seas; Sea of Okhotsk; Barents Sea; Kara Sea; Laptev Sea; East Siberian Sea; north of Faroes; north of Iceland; south of Spitsbergen; Novaya Zemlya; Herschel Island, Yukon Territory; 40–1469 m.

Family Nannoniscidae

Austroniscus vinogradovi (Gurjanova, 1950).

Nannoniscella vinogradovi Gurjanova 1950.

Type locality: Avachin Bay, Kamchatka Sea. Distribution: Gulf of Alaska; Kamchatka Sea; 125–300 m.

Hebefustis vitjazi Mezhov, 1986.

Type locality: Gulf of Alaska (53°43′N, 163°38′W). Distribution: Known only from type locality; 1550 m; rare.

Nannoniscoides laticontractus Mezhov, 1986.

Type locality: Gulf of Alaska (53°43′N, 163°38′W). Distribution: Known only from type locality; 1550 m; rare.

Nannonisconus carinatus Mezhov, 1986.

Type locality: Gulf of Alaska (53°48′N, 163°28′W). Distribution: Known only from type locality; 1040 m.

Nannoniscus cristatus Mezhov, 1986.

Type locality: Gulf of Alaska (53°29′N–57°37′N, 148°34′W–163°21′W). Distribution: Known only from type locality; 3080–3200 m.

Nannoniscus menziesi Mezhov, 1986.

Type locality: Gulf of Alaska (51°40′N, 163°00′W). Distribution: Known only from type locality; 4800 m.

Family incertae sedis

Jaerella armata Richardson, 1911.

Type locality: Western part of the Aleutian Islands, southern Bering Sea. Distribution: Known only from type locality; 549 m; rare.

Tole alascensis (Benedict, 1905).

Iolella alascensis Benedict 1905.

Type locality: Near Barrow, Alaska. Distribution: Arctic Alaska; 35 m.

Tole sarsi (H. Richardson, 1905).

Iolella sarsi Richardson 1905.

Type locality: Constantine Bay, Amchitka Islands, Alaska. Distribution: Known only from type locality; 15 m; rare.

Suborder Anthuridea

Family Leptanthuridae

Calathura brachiata (Stimpson, 1853).

Anthura brachiata Stimpson 1853; *Paranthura norvegica* G.O. Sars 1872; *Paranthura arctica* Heller 1875.

Type locality: Northern point of Duck Island, New Brunswick, Canada. Distribution: Bering Sea; Sea of Okhotsk; Kuril Islands; North Atlantic (Brandt and Negoescu, 1997); 9–2500 m.

Suborder Epicaridea

Family Bopyridae

Argeia pugettensis Dana, 1853.

Argeia pauperata Stimpson 1857; *Argeia calmani* Bonnier 1900; *Argeia pingi* Yu 1935.

Type locality: Puget Sound, Washington. Distribution: Bering Sea to southern California; Japan; Korea; 32–188 m.

Remarks: Branchial parasites on shrimps of the family Crangonidae.

Bopyroides hippolytes (Krøyer, 1838).

Bopyrus hippolytes Krøyer 1838; *Bopyroides acutimarginatus* Stimpson 1864; *Gyge hippolytes*: Bate and Westwood 1868.

Type locality: Greenland. Distribution: Circumpolar; Bering Sea to Oregon; Aleutian Islands; North Atlantic; 9–128 m.

Remarks: Found on several species of the caridean shrimp genera *Pandalus, Pandalopsis,* and *Spirontocaris.*

Hemiarthrus abdominalis (Krøyer, 1840).

Bopyrus abdominalis Krøyer 1840; *Phryxus hippolytes* Rathke 1843; *Phryxus abdominalis*: Lilljeborg 1852.

Type locality: Greenland. Distribution: Circumpolar; Arctic Ocean south in the eastern North Pacific to California; North Atlantic; 9–642 m.

Remarks: Found on several species of the caridean shrimp genera *Pandalus* and *Spirontocaris.*

Pseudione giardi Calman, 1898.

Type locality: Puget Sound, Washington. Distribution: Bering Sea to Washington; depth unknown.

Remarks: Found in the branchial cavity of *Pagurus* spp.

Family Cryptoniscidae

Hemioniscus balani Buchholz, 1866.

Cryptothir balani (Buchholz 1866); *Cryptothiria balani* (Buchholz 1866); *Cryptoniscus balani* (Buchholz 1866).

Type locality: Europe. Distribution: Introduced in the eastern Pacific, from southern Alaska to Baja California, Mexico; intertidal zone on barnacles of the genera *Balanus* and *Chthamalus.*

Family Dajidae

Holophryxus alascensis H. Richardson, 1905.

Holophryxus californiensis Richardson 1908; *Hypodajus georgiensis* Nierstrasz and Brend à Brandis 1931.

Type locality: Vicinity of Yes Bay, Behm Canal, Alaska. Distribution: Behm Canal, Alaska, to Santa Barbara Channel, California; 44–700 m.

Remarks: Found on dorsal part of carapace of the caridean shrimp *Pasiphaea pacifica.*

Suborder Flabellifera

Family Aegidae

Aega plebeia Hansen, 1897.

Aega magnoculis Richardson, 1909.

Type locality: Near Galapagos Islands. Distribution: Bering Strait to Peru and Tierra del Fuego; 688–2534 m.

Aega symmetrica Richardson, 1905.

Type locality: Not indicated (localities mentioned are Naha Bay, Behm Canal, southeast Alaska, and Queen Charlotte Sound, Vancouver Island, British Columbia). Distribution: Bering Sea to southern California; 75–196 m.

Aegiochus symmetrica (Richardson, 1905).

Aega symmetrica Richardson 1905.

Type locality: Naha Bay, Behm Canal, Southeast Alaska. Distribution: Southeast Alaska to California; 75–1025 m.

Rocinela angustata Richardson, 1904.

Type locality: Japan. Distribution: Bering Sea, Alaska, to central western Baja California, Mexico; western North Pacific; 30–2214 m.

Rocinela belliceps (Stimpson, 1864).

Aega belliceps Stimpson 1864; *Aega alascensis* Lockington 1877.

Type locality: Washington. Distribution: Bering Sea south to southern California; Aleutian Islands; ?western North Pacific; 9–1258 m.

Remarks: This species is parasitic on cods (Gadidae) and sculpins (Cottidae).

Rocinela cornuta Richardson, 1898.

Type locality: Shumagin Bank, Alaska. Distribution: Known only from type locality; 1143 m; rare.

Rocinela propodialis H. Richardson, 1905.

Type locality: Admiralty Inlet, Port Townsend, Washington. Distribution: Alaska to Washington; 27–48 m.

Family Anuropidae

Anuropus bathypelagica Menzies and Dow, 1958.

Type locality: California. Distribution: Bering Sea south to California; pelagic; probably a symbiont on jellyfish and salps.

Anuropus kussakini Vasina, 1998.

Type locality: Southcentral Bering Sea (55°57′8″N, 177°38′E). Distribution: Known only from the type locality; 500–3770 m.

Family Cymothoidae

Elthusa californica (Schiödte and Meinert, 1884).

Livoneca californica Schiödte and Meinert 1884.

Type locality: California. Distribution: Alaska to Peru; found on dwarf surfperch (*Micrometrus minimus*), shiner surfperch (*Cymatogaster aggregata*), surf smelt (*Hypomesus pretiosus*), topsmelt (*Atherinops affinis*), arrow goby (*Clevelandia ios*) and California killifish (*Fundulus parvipinnis*); depth unknown.

Family Limnoriidae

Limnoria lignorum (Rathke, 1799). Wood gribble.

Cymothoa lignorum Rathke 1799; *Limnoria tenebrans* Leach 1813; *Limnoria uncinata* Heller 1866; *Limnoria californica* Hewston 1874 (*nomen nudum*).

Type locality: Norway. Distribution: Temperate and boreal Northern Hemisphere; Kodiak Island, Alaska to Point Arena, California; North Atlantic; intertidal zone to 20 m.

Remarks: This species is a wood borer.

Family Sphaeromatidae

Dynamene tuberculosa Richardson, 1899.

Type locality: California. Distribution: Aleutian Islands to southern California; shallow water.

Exosphaeroma paydenae Wall, Bruce, and Wetzer, 2015.

Exosphaeroma amplicauda: Gurjavona 1936, Kussakin 1979.

Type locality: Kiska Harbor, Aleutian Islands, Alaska (52.00°N, 177.31°E). Distribution: Aleutian Islands, Alaska; shallow subtidal.

Gnorimosphaeroma insulare (Van Name, 1940).

Exophaeroma insulare Van Name 1940; *Gnorimosphaeroma oregonensis lutea* Menzies 1954; *G. lutea* Menzies 1954.

Type locality: California. Distribution: Southern Alaska to San Nicolas Island, Los Angeles, California; Aleutian Islands; shallow estuaries and lagoons along the coast.

Gnorimosphaeroma oregonense (Dana, 1853).

Sphaeroma oregonense Dana 1853; *Exosphaeroma oregonensis*: Richardson 1905.

Type locality: Washington. Distribution: Alaska to San Francisco Bay, California; intertidal zone to 24 m.

Paracerceis cordata (H. Richardson, 1899).

Cilicaea cordata Richardson 1899.

Type locality: California. Distribution: Aleutian Islands to southern California; intertidal zone to shallow subtidal.

Family Tecticipitidae

Tecticeps alascensis H. Richardson, 1897.

Type locality: Near Nunivak Island, Alaska. Distribution: Eastern Bering Sea to the Aleutian Islands; Kamchatka, Kuril Islands, Okhotsk Sea; 16–194 m.

Suborder Gnathiidea

Family Gnathiidae

Caecognathia elongata (Krøyer, 1847).

Anceus elongata Krøyer 1847; *Gnathia elongata* (Krøyer 1847).

Type locality: Greenland. Distribution: Southern Alaska and northern Atlantic; littoral to 3000 m.

Gnathia tridens Menzies and Barnard, 1959.

Type locality: California. Distribution: Gulf of Alaska to California; 11–27 m.

Gnathia trilobata Schultz, 1966.

Type locality: Coronado Canyon, California. Distribution: Southern Alaska to southern California; 98–976 m.

Suborder Oniscidea

Family Armadillidiidae

Armadillidium vulgare (Latreille, 1804).

Armadillo vulgare Latreille 1804; *Armadillo pilularis* Say 1818; *Armadillidium commutatum* Brandt and Ratzeburg 1830–1834; *Armadillo trivialis* Koch 1835–1844; *Armadillo ater* Schnitzler 1853.

Type locality: Europe. Distribution: Cosmopolitan;

introduced into Alaska and the continental United States; depth unknown.

Family Ligiidae

Ligia pallasii Brandt, 1833.

Ligia dilatata Stimpson 1857; *Ligia septentrionalis* Lockington 1877; *Ligia stimpsoni* Miers 1877.

Type locality: Unalaska, Aleutian Islands. Distribution: Alaska to Santa Cruz, California; rocky shores on open coast environments.

Ligidium gracile (Dana, 1856).

Styloniscus gracilis Dana 1856; *Alloniscus maculosus* Harford 1877.

Type locality: California. Aleutian Islands to central California; depth unknown.

Ligidium tenue Budde-Lund, 1885.

Type locality: Sitka, Alaska. Distribution: Known only from type locality; depth unknown.

Family Porcellionidae

Porcellio laevis Latreille, 1804.

Oniscus laevis: Lamarck 1818; *Porcellio degeerii* Audouin and Savigny 1826; *Porcellio eucercus* Brandt 1833; *Porcellio syriacus* Brandt 1833; *Porcellio cinerascens* Brandt 1833; *Porcellio dubius* Brandt 1833; *Porcellio poeyi* Guérin 1837; *Porcellio urbicus* Koch 1835–1844; *Porcellio ovatus* Zaddach 1844; *Porcellio cubensis* Saussure 1858; *Porcellio sumichrasti* Saussure 1858; *Porcillio cotillar* Saussure 1858; *Porcellio mexicanus* Saussure 1858; *Porcellio aztecus* Saussure 1858.

Type locality: Southern Europe. Distribution: Cosmopolitan; introduced into Alaska and the continental United States; depth unknown.

Porcellio scaber Latreille, 1804.

Oniscus granulatus Lamarck 1818; *Pocellio nigra* Say 1818; *Porcellio brandtii* Milne Edwards 1840; *Porcellio dubius* Koch 1835–1844; *Porcellio gemmulatus* Dana 1853; *Philoscia tuberculata* Stimpson 1856; *Porcellio montezumae* Saussure 1858; *Porcellio paulenses* Heller 1868; *Porcellio scaber americanus* Arcangeli 1932.

Type locality: Western Europe. Distribution: Cosmopolitan; introduced into Alaska, Canada, and the continental United States; depth unknown.

Family Scyphacidae

Detonella papillicornis (H. Richardson, 1904).

Trichoniscus papillicornis H. Richardson 1904; *Detonella lohmanderi* Verhoeff 1942.

Type locality: Seldovia, Cook Inlet, Alaska. Distribution: Bering Sea to San Francisco Bay, California; Aleutian Islands; Bering Island; littoral, common under rocks above high tide line.

Suborder Valvifera

Family Antarcturidae

Antarcturus hirsutus (Richardson, 1904).

Arcturus hirsutus Richardson 1904.

Type locality: Rat Islands, Aleutian Islands. Distribution: Aleutian Islands; southern Bering Sea; Bering Island; Omai Saki Light; 243–4070 m.

Pleuroprion intermedium (H. Richardson, 1899).

Arcturus intermedium Richardson 1899.

Type locality: Kiska Harbor, Aleutian Islands. Distribution: Aleutian Islands; 18–40 m.

Pleuroprion murdochi (Benedict, 1898).

Arcturus murdochi Benedict 1898.

Type locality: Point Franklin, Alaska. Distribution: Arctic Ocean and Alaska; 40–200 m.

Family Arcturidae

Arcturus beringanus Benedict, 1898.

Type locality: Southeastern Bering Sea (57°22′20″N, 164°24′40″W). Distribution: Eastern Bering Sea; 13–140 m.

Arcturus brevispinis Richardson, 1909.

Type locality: East Cape, Attu Island, Aleutian Islands (52°55′40″N, 173°26′E). Distribution: Known only from type locality; 250 m; rare.

Arcturus diversispinus Richardson, 1909.

Type locality: East Cape, Attu Island, Aleutian Islands (52°55′40″N, 173°26′E). Distribution: Known only from type locality; 250 m; rare.

Arcturus longispinis Benedict, 1898.

Type locality: Aleutian Islands, southern Bering Sea (52°05′N, 177°40′W). Distribution: Known only from the type locality; 110 m; rare.

Arcturus magnispinis Richardson, 1909.

Type locality: Semisopochnoi Island, southern Bering Sea (Petrel Bank). Distribution: Southern Bering Sea; 78–430 m.

Astacilla glaber (Benedict, 1898).

Arcturus glabrus Benedict 1898; *Arcturus glaber* (Benedict 1898).

Type locality: Aleutian Islands, southern Bering Sea (52°05′N, 177°40′W). Distribution: Aleutian Islands; between Bristol Bay and the Pribilof Islands, Alaska; 66–104 m.

Neastacilla tritaeniata (Richardson, 1909).

Arcturus tritaeniatus Richardson 1909.

Type locality: Semisopochnoi Island, Aleutian Islands. Distribution: Southern Bering Sea; Aleutian Islands; 5–77 m.

Family Chaetiliidae

Saduria entomon (Linnaeus, 1758).

Oniscus entomon Linnaeus 1758; *Squilla entomon*: De Geer 1778; *Asellus entomon*: Olivier 1789; *Idotea entomon*: Bosc 1802; *Idotaega longicauda* Lockington 1877; *Glyptonotus entomon*: Miers 1883; *Mesidotea entomon*: H. Richardson 1905.

Type locality: Eastern North Atlantic. Distribution: Circumpolar; west coast of North America to Pacific Grove, California; Germany; Stockholm; Nakvak; Labrador; Kara Sea; intertidal zone to 30 m.

Saduria sabini (Krøyer, 1849).

Idotea sabini Krøyer 1849; *Glyptonotus sabini*: Miers 1883; *Chiridotea sabini*: Stebbing 1900; *Mesidotea sabini*: H. Richardson 1905.

Type locality: Eastern North Atlantic. Distribution: Circumpolar; Point Barrow and Ooglaamie, Alaska; Kara Sea; Davis Straits; Greenland; 5–1445 m.

Saduria sibirica (Birula, 1896).

Glyptonotus sibirica Birula 1896.

Type locality: Siberia. Distribution: Arctic Canada and Alaska (Beaufort Sea); East Siberian Sea; 0–90 m.

Family Idoteidae

Idotea fewkesi H. Richardson, 1905.

Type locality: Santa Barbara, California. Distribution: Gulf of Alaska to southern California; depth unknown, ?shallow water.

Idotea obscura Rafi, 1972.

Type locality: British Columbia. Distribution: Southeast Alaska to British Columbia; intertidal zone to 21 m.

Idotea ochotensis Brandt, 1851.

Type locality: Sea of Okhotsk. Distribution: Alaska to northern California; Sea of Okhotsk; intertidal zone to 36 m.

Idotea rufescens Fee, 1926.

Type locality: British Columbia. Distribution: Prince William Sound to Marin County, California; intertidal zone to 82 m.

Idotea urotoma Stimpson, 1864.

Type locality: Puget Sound, Washington. Distribution: Alaska to western Baja California, Mexico; intertidal zone to 73 m.

Pentidotea resecata (Stimpson, 1857).

Idotea resecata Stimpson 1857.

Type locality: Vancouver Island, British Columbia. Distribution: Karta Bay, Alaska, to southwest Baja California, Mexico; intertidal zone.

Pentidotea schmitti (Menzies, 1950).

Idotea schmitti Menzies 1950; *Idotea whitei* Stimpson 1864.

Type locality: California. Distribution: Bering Sea to Mexico; intertidal zone to 73 m.

Pentidotea stenops (Benedict, 1898).

Idotea stenops Benedict 1898.

Type locality: Monterey Bay, California. Distribution: Alaska to western Baja California, Mexico; intertidal to shallow subtidal zones.

Pentidotea wosnesenskii (Brandt, 1851).

Idotea wosnesenskii Brandt 1851; *Idotea hirtipes* Dana 1853; *Idotea oregonensis* Dana 1853.

Type locality: Sea of Okhotsk. Distribution: Alaska to Baja California, Mexico; intertidal zone to 17 m.

Synidotea bicuspida (Owen, 1839).

Idotea bicuspida Owen 1839; *Idotea pulchra* Lockington 1877; *Idotea rugulosa* Buchholz 1874; *Synidotea incisa* Sars 1880; *Edotea bicuspida*: Miers 1883.

Type locality: Bering Sea. Distribution: Predominantly Arctic circumpolar, including the Bering Sea; 6–250 m; common.

Synidotea consolidata (Stimpson, 1857).

Idotea consolidata Stimpson 1857; *Synidotea macginitiei* Maloney 1933.

Type locality: Pacific Grove, California. Distribution: Southern Alaska to central California; intertidal zone to 20 m.

Remarks: This species has been confused with the very similar circum-Arctic *Synidotea bicuspida*.

Synidotea erosa Benedict, 1897.

Type locality: Sanak Island, Alaska. Distribution: Known only from type locality; 869 m; rare.

Synidotea laevis Benedict, 1897.

Type locality: Between Bristol Bay and Pribilof Islands. Distribution: Bering Sea; 52–66 m.

Synidotea muricata (Harford, 1877).

Idotea muricata Harford 1877; *Synidotea spinosa* Gurjanova 1933; *Synidotea spinosa anadyrensis* Gurjanova 1955.

Type locality: Bering Sea. Distribution: Icy Cape, Alaska, to California; 45–150 m.

Synidotea nebulosa Benedict, 1897.

Type locality: Unalaska. Distribution: Bering Sea; Aleutian Islands; Kamchatka; intertidal zone to 380 m.

Synidotea nodulosa (Krøyer, 1846).

Idotea nodulosa Krøyer 1846; *Edotea nodulosa*: Miers 1883.

Type locality: Greenland. Distribution: Arctic seas southward on Pacific coast as far as Washington; western North Pacific; North Atlantic; 5–343 m.

Synidotea pallida Benedict, 1897.

Type locality: Chirikof Island, Alaska. Distribution: Alaska; 1380–1641 m.

Synidotea picta Benedict, 1897.

Type locality: Alaska. Distribution: Bering Strait and Alaska; 9–40 m.

Synidotea ritteri H. Richardson, 1904.

Type locality: California. Distribution: Southeast Alaska to California; intertidal zone.

Order Lophograstrida—The Lophogastrids

The lophogastrids are shrimp-like animals that mostly inhabit the deep pelagic waters of the oceans. Though originally classified as a suborder within the peracaridan order Mysidacea, together with the Mysida, recent molecular data has separated these two groups (Meland and Willassen, 2007). Lophogastrids also differ from the mysids by lacking statocysts in their uropods and by having well-developed biramous pleopods. Currently 56 species are known (Ahyong et al., 2011), with five species occurring in Alaskan waters (Table 1).

Family Eucopiidae

Eucopia australis Dana, 1852.

Eucopia major Hansen 1910; *Eucopia unguiculata*: Tattersall 1951 (in part).

Type locality: Antarctic seas, 66°12′S, 149°44′E, south of New Holland; taken from the stomach of a penguin. Distribution: Panoceanic; Bering Sea to southern California; Canary Islands and Cape Verde; Antarctica; Gulf of Mexico; 400–5000 m.

Eucopia grimaldii Nouvel, 1942.

Eucopia unguiculata: Banner 1948; *Eucopia australis*: G.O. Sars 1885 (in part?).

Type locality: Not specified; collected in Atlantic Ocean: Gulf of Gascogne, Azores, Canaries, central Atlantic Ocean. Distribution: Bering Sea to Washington and Japan; Cape Verde; Madeira; Gulf of Mexico; 200–4829 m.

Eucopia unguiculata (Willemoes-Suhm, 1875).

Chalaraspis unguiculata Willemoes-Suhm 1875; *Eucopia australis*: Sars 1885; *Eucopia hanseni*: Nouvel 1942; *Eucopia unguiculata*: Tattersall 1951 (in part).

Type locality: Atlantic Ocean. Distribution: Eastern North Pacific: Bering Sea to California; Savage Islands; Atlantic: Canary Islands and Cape Verde; Mediterranean; Indo-Pacific; Gulf of Mexico; 200–4829 m.

Family Gnathophausiidae

Neognathophausia gigas (Willemoes-Suhm, 1873).

Gnathophausia gigas Willemoes-Suhm 1873; *Gnathophausia drepanephora* Holt and Tattersall 1905.

Type locality: 644 km west of the Azores. Distribution: Panoceanic; Bering Sea south to Central America; Canary Islands and Cape Verde; Antarctica; Australia; 200–7000 m.

Neognathophausia ingens (Dohrn, 1870).

Lophogaster ingens Dohrn 1870; *Gnathophausia inflata* Willemoes-Suhm 1873; *Gnathophausia ingens*: Sars 1885; *Gnathophausia calcarata* Sars 1885; *Gnathophausia bengalensis* Wood-Mason and Alcock 1891; *Gnathophausia doryphora* Illig 1906; *Neognathophausia ingens*: Petryashov 1992.

Type locality: West coast of Africa. Distribution: Bering Sea to California; Canary Islands and Cape Verde; Australia; Madagascar; Gulf of Mexico; 350–4000 m.

Order Mysida—The Opossum Shrimps

The Mysida (opossum shrimps) had been recognized as a subgroup within the peracarid order Mysidacea, along with the Lophogastrida, but recent molecular research has challenged that view and they are now considered two separate, unrelated lineages (Jarman et al., 2000; Spears et al., 2005; Meland and Willassen, 2007). Some evidence has indicated that the Mysida is more closely related to the Euphausiacea and should be removed from the Peracarida (Jarman et al., 2000; Meland and Willassen, 2007). The higher classification here follows Meland and Willassen (2007). About 1191 species are extant (Ahyong et al., 2011), with approximately 43 species occurring in Alaskan waters (Table 1). Major resources used to compile the information for the list of mysids included Price (2004) and the Peracarid interactive database (Anderson, 2011). Keys to identify species of the western North Pacific are Daly and Holmquist (1986) and Kathman et al. (1986). A key to identify Arctic species can be found in Vassilenko and Petryashov (2009).

Family Mysidae

Subfamily Mysinae

Acanthomysis borealis Banner, 1954.

Type locality: Port Moller, Bristol Bay, Alaska (in the stomach of Pacific cod, *Gadus macrocephalus*). Distribution: Known only from type locality; 37–80 m; rare.

Remarks: Fukuoka and Murano (2005) suggested that this species be transferred to the genus *Exacanthomysis*.

Alienacanthomysis macropsis (Tattersall, 1932).

Neomysis macropsis Tattersall 1932; *Acanthomysis macropsis*: Ii 1936.

Type locality: San Francisco Bay, California. Distribution: Southern Alaska to Southern California Bight; 0–75 m.

Archaeomysis grebnitzkii Czerniavsky, 1882.

Callomysis maculata Holmes 1894; *Archaeomysis maculata*: Zimmer 1927.

Type locality: Bering Island, Bering Sea (in the stomach of Pacific cod). Distribution: Alaska to Southern California Bight; Kamchatka; intertidal and shallow subtidal zones.

Disacanthomysis dybowskii (Derzhavin, 1913).

Orientomysis dybowskii Derzhavin 1913; *Acanthomysis dybowskii*: Ii 1936.

Type locality: Kamchatka Peninsula. Distribution: Arctic Ocean; Bering Sea to Washington; Kamchatka; Korea; 8–140 m.

Exacanthomysis alaskensis (Banner, 1954).

Acanthomysis alaskensis Banner 1954.

Type locality: Cape Seniavin on the Alaskan Peninsula (stomach of walleye pollock, *Gadus chalcogrammus*). Distribution: Southern Alaska to Washington; shallow subtidal to 55 m.

Exacanthomysis arctopacifica Holmquist, 1981.

Type locality: Point Hope, Alaska. Distribution: Chukchi Sea; Bering Sea; southern Alaska; 0–30 m.

Exacanthomysis davisi (Banner, 1948).

Acanthomysis davisi Banner 1948; *Neomysis costata* Tattersall 1932.

Type locality: Near the Friday Harbor Laboratory, San Juan Island, Puget Sound, Washington. Distribution: Southern Alaska to California; shallow subtidal zone to 50 m.

Exacanthomysis stelleri (Derzhavin, 1913).

Orientomysis stelleri Derzhavin 1913; *Neomysis stelleri*: Tattersall 1933; *Acanthomysis stelleri*: Tattersall 1951.

Type locality: Petropavlovsk Bay, Kamchatka Peninsula. Distribution: Arctic Ocean; Bering Sea to southern Alaska; 0–104 m.

Holmesiella anomala Ortmann, 1908.

Type locality: Near Funter Bay, Lynn Canal, Alaska. Distribution: Alaska to southern California; ?Korea; 50–1000 m.

Remarks: This species exhibits considerable morphological variation, especially related to size (Banner, 1948). Tattersall (1951) suggested that it consists of a smaller, shallow water form (~ 180 m depth) and a larger, deeper water form (550–750 m). The latter form tends to be found in southern latitudes.

Inusitatomysis insolita Li, 1940.

Insuitatomysis serrata: Tattersall 1951; ?*Inusitatomysis californica* Bacescu and Gleye 1979.

Type locality: Urusan, Korea Straits. Distribution: Bering Sea; British Columbia; California; Japan; 10–200 m.

Mysis litoralis (Banner, 1948).

Pugetomysis litoralis Banner 1948; *Mysis oculata*: Banner 1954 (in part); *Mysis litoralis*: Holmquist 1958 (in part).

Type locality: Friday Harbor, San Juan Island, Washington. Distribution: Arctic Ocean; Bering Sea to Washington; 0.5–27 m.

Mysis oculata (O. Fabricius, 1780).

Cancer oculatus Fabricius 1780; *Mysis fabricii* Leach 1815; *Megalophthalmus fabricianus* Leach 1830; *Mysis flexuosa* Adams 1852; *Mysis spinulosus* Packard 1863.

Type locality: Godhaun, Greenland. Distribution: High boreal Arctic circumpolar, including Chukchi, Barents, White, Kara, East Siberian, and Laptev seas; in the Pacific extending to the Bering Sea; 1–243 m.

Mysis polaris Holmquist, 1959.

Type locality: Kara Sea, Arctic Ocean. Distribution: Arctic circumpolar; littoral zone.

Mysis segerstralei Audzijonyte and Vainola, 2005.

Mysis relicta: Linko 1908 (in part?) (White Sea basin), Schmitt 1919 (Northern Canada), Mohr 1953 (Alaska), Holmquist 1959, 1963, 1975 (in part) (circum-Arctic), Toivonen 1966 (Lake Pulmankijarvi, Northern Finland), Johnson 1964 (in part) (Arctic Canada), Petryashov 1989 (in part) (White Sea); *Mysis oculata* var. *relicta*: Olofsson 1918 (Spitsbergen, Svalbard); *Mysis relicta* III: Vainola 1986 (Lake Pulmankijarvi); *Mysis relicta* sp. III: Vainola 1993, Vainola et al. 1994, 2002.

Type locality: Lake Pulmankijarvi, Utsjoki, Northern Finland. Distribution: Circum-Arctic; coastal depths.

Neomysis awatschensis (Brandt, 1851).

Mysis awatschensis Brandt 1851.

Type locality: Kamchatka seas ("*Kamtschatkischen Meere*"). Distribution: Pacific subtropical-boreal; southeastern Chukchi Sea, Chaunskiy Bay estuary in East Siberian Sea; northern South China Sea; Japan; Korea; 0–11 m.

Neomysis czerniawskii Derzhavin, 1913.

Type locality: Kamchatka Peninsula. Distribution: North Pacific; Bering Sea, Alaska; Korea; Japan; Kamchatka; 0–73 m.

Neomysis intermedia (Czerniavsky, 1882).

Boreomysis intermedia Czerniavsky 1882.

Type locality: Bering Island, Commander Islands. Distribution: Western North Pacific to Pacific and Arctic coasts of Alaska, Arctic coast of Northwest Territories, Canada; coastal depths.

Remarks: Petryashov (1992) concluded that *B. intermedia* was a junior synonym of *Neomysis awatschensis*.

Neomysis kadiakensis Ortmann, 1908.

Type locality: Afognak Bay, Afognak Island, Kodiak Island Group, Alaska. Distribution: Southern Alaska to Southern California Bight; 1–210 m.

Neomysis mercedis Holmes, 1897.

Type locality: Lake Merced, California. Distribution: Southern Alaska to southern California; littoral and shallow neritic.

Neomysis mirabilis (Czerniavsky, 1882).

Type locality: Gulf of Castries, North Pacific. Distribution: North Pacific; Bering Sea, Alaska; Japan; Kuril Islands; coastal depths.

Neomysis rayii (Murdoch, 1885).

Mysis rayii Murdoch 1885; *Neomysis franciscorum* (Holmes 1900); *Neomysis toion* Derzhavin 1913.

Type locality: Point Barrow, Alaska. Distribution: Bering Sea and adjacent Arctic Ocean south to central California and Kamchatka Bay; 1–300 m.

Pacifacanthomysis nephrophthalma Holmquist, 1981.

Acanthomysis nephrophthalma Banner 1948.

Type locality: British Columbia, Canada. Distribution: Southern Alaska to southern California; 22–900 m.

Proneomysis wailesi Tattersall, 1933.

Type locality: Not stated; description based on specimens from Burrard Inlet at Vancouver city and Departure Bay at Vancouver Island, British Columbia, Canada. Distribution: Southern Alaska to Baja California; 3–50 m.

Stilomysis grandis (Goes, 1863).

Mysis grandis Goes 1863; *Mysideis grandis*: Sars 1879.

Type locality: Spitsbergen, Norway. Distribution: Circumpolar, Arctic to cold boreal; eastern Bering Sea, north of Akutan Pass; Aleutian Islands; British Columbia, Howe Sound; Greenland; Norway; Novaya Zemlya; 0–5000 m.

Remarks: Daly and Holmquist (1986) note that the few published records of this species from the eastern North Pacific may be questionable.

Telacanthomysis columbiae (W. Tattersall, 1933).

Neomysis columbiae Tattersall 1933; *Acanthomysis columbiae*: Ii 1936; "*Acanthomysis*" forma *supraculospinifera columbiae*: Kathman et al. 1986.

Type locality: Not stated; description based on specimens from Port Alexander at Baranof Island, Alaska, and Departure Bay at Vancouver Island, British Columbia, Canada. Distribution: Alaska to California; 5–20 m.

Xenacanthomysis pseudomacropsis (Tattersall, 1933).

Neomysis pseudomacropsis Tattersall 1933; *Acanthomysis pseudomacropsis*: Ii 1936.

Type locality: Not stated; description based on specimens from Burrard Inlet at Vancouver City, Departure Bay at Vancouver Island, both British Columbia, Canada and Port Alexander at Baranof Island, Alaska. Distribution: Eastern North Pacific: Arctic (Beaufort Sea) and Bering Sea south to Washington; western North Pacific: Kamchatka; Korea; 0–175 m.

Subfamily Boreomysinae

Boreomysis arctica (Krøyer, 1861).

Mysis arctica Krøyer 1861; *Arctomysis arctica*: Czerniavsky 1883; *Boreomysis arctica*: Sars 1869; *Boreomysis tregouboffi* Bacescu 1941.

Type locality: West Greenland, specific location unknown. Distribution: Arctic Ocean; Bering Sea; California; Okhotsk Sea; Suruga Bay; Canaries; Norway; Greenland; North Atlantic; 170–2500 m.

Boreomysis californica Ortman, 1894.

Boreomysis media Hansen 1912; *Boreomysis kincaidi* Banner 1948.

Type locality: 50 miles south of Guaymas, Gulf of California. Distribution: Bering Sea to Peru; Antarctica; Indo-Pacific and Southern Ocean; Atlantic-off Africa; 50–5500 m.

Boreomysis inermis (Willemoes-Suhm, 1874).

Petalophthalmus inermis Willemoes-Suhm 1874; *Petalophthalmus armiger* Willemoes-Suhm 1875 (female); *Boreomysis scyphops* G.O. Sars 1885; *Boreomysis suhmi* Faxon 1893; *Boreomysis distinguenda* Hansen 1908; *Birsteiniamysis inermis*: Tchindonova 1981.

Type locality: Near Crozet Islands, Indian Ocean, 46°16′S, 48°27′E. Distribution: Eastern North Pacific from Bering Sea to southern California; South Atlantic; Antarctic; South Pacific; 728–7200 m.

Boreomysis microps G. O. Sars, 1884.

Boreomysis subpellucida Hansen 1905.

Type locality: South of Nova Scotia, 42°08′N, 63°39′W. Distribution: Southern Alaska to Washington; Canaries; deep tropical and sub-tropical to temperate waters of the Atlantic and Indian Ocean; 0–3710 m.

Boreomysis nobilis G. O. Sars, 1885.

Type locality: Greenland Sea. Distribution: Northern Barents Sea, Kara, Laptev, and Beaufort seas and adjacent regions of the Arctic basin (Iceland, Faroes, Greenland); eastern North Pacific (Alaska); 193–1880 m.

Boreomysis sp. (***rostrata*** complex) Illig, 1906.

Boreomysis rostrata Illig 1906; *Boreomysis inermis*: Hansen 1910; *Boreomysis jacobi* Holmquist 1956.

Type locality: Northeast of New Amsterdam, Indian Ocean (*B. rostrata*). Distribution: Eastern North Pacific from Alaska to Oregon; South Atlantic; Indian Ocean; southeastern Pacific; 50–2100 m.

Remarks: Illig's specimens included more than one species. His drawings of the females are probably *B. rostrata,* but the males are not (Kathman et al., 1986).

Subfamily Erythropinae

Amblyops abbreviata (M. Sars, 1869).

Pseudomma abbreviatum M. Sars 1869.

Type locality: Lofoten, Norway. Distribution: Arctic; Alaska to British Columbia; Kuril Islands; western North Atlantic; Ireland; 150–1500 m.

Remarks: Daly and Holmquist (1986) considered the material from the western North Pacific to be questionable.

Caesaromysis hispida Ortmann, 1893.

Caesaromysides liguriae Colosi 1916; *Caesaromysis vanclevei* Banner 1948.

Type locality: Mid-Atlantic near Equator. Distribution: Cosmopolitan; Alaska to central California; Kuril-Kamchatka trench; Liberia; Uruguay; South Africa; Tristan da Cunha; Cape Verde; Brazil; Madagascar; Antarctica;

widespread in the tropical and subtropical Atlantic; Indian Ocean; 50–3200 m.

Remarks: Morphological differences exist between Pacific and Atlantic populations (Daly and Holmquist, 1986).

Meterythrops intermedius Fukuoka and Murano, 2006.

Type locality: Shelikof Strait, Alaska. Distribution: Known only from type locality; depth unknown.

Meterythrops microphthalmus W. Tattersall, 1951.

Meterythrops robusta: Taniguchi 1969.

Type locality: Chirinkotan Island, Sea of Okhotsk. Distribution: Shelikof Strait, Alaska; western North Pacific; Sea of Okhotsk; Sea of Japan; Kuril Islands; off northeastern and central Japan; mesopelagic zone, 0–2000 m.

Meterythrops robustus Smith, 1879.

Meterythrops robusta Smith 1879; *Parerythrops robusta*: Sars 1879; non *Meterythrops robusta*: Holt and Tattersall 1905 [= *Parerythrops obesa* (Sars 1864)]; non *Meterythrops robusta*: Taniguchi 1969 [= *Meterythrops microphthalmus*].

Type locality: Not stated, but six specimens were examined from two locations: Massachusetts Bay, off Salem, USA and Gulf of St. Lawrence, Bay of Chaleurs, New Brunswick, Canada. Distribution: Arctic; North Pacific, Bering Sea, Alaska to Washington; North Atlantic; 17–900 m.

Remarks: Daly and Holmquist (1986) considered the records of this species in the eastern North Pacific to be questionable.

Michthyops arctica Petryashov, 1993.

Type locality: Canadian basin, Arctic Ocean (79°23′N, 128°27.8′W). Distribution: Arctic bathyal; 1079–3550 m.

Michthyops theeli (Ohlin, 1901).

Pseudomma theeli Ohlin 1901.

Type locality: East Greenland, Franz Joseph Fjord, entrance of Musk-ox Fjord. Distribution: Arctic circumpolar; Arctic basin, from northern Barents Sea to northern Chukchi Sea; 27–2245 m.

Pseudomma roseum G. O. Sars, 1870.

Type locality: Norway. Distribution: Widespread boreal Arctic; Arctic basin and adjacent regions of the Chukchi, Barents, Kara, Laptev, and East Siberian seas; Norway to Bay of Biscay; Faroes, Iceland, Greenland, Gulf of St. Lawrence, Gulf of Maine, Georges Bank; 60–1260 m.

Pseudomma truncatum Smith, 1879.

Pseudomma sp. Whiteaves 1874.

Type locality: Gulf of St. Lawrence. Distribution: Arctic Ocean; Bering Sea to Puget Sound, Washington; Kuril Strait; North Atlantic; Greenland; Iceland; Spitsbergen; Norway; Ireland; 25–780 m.

Remarks: Meland (2004) suggested that populations from the northern Pacific may represent a separate species.

Family Petalophthalmidae

Ceratomysis spinosa Faxon, 1893.

Ceratomysis egregia Hansen 1910.

Type locality: Gulf of Panama. Distribution: Bering Sea to southern Alaska; Sea of Okhotsk; Japan; 1050–3400 m.

Petalophthalmus armiger Willemoes-Suhm, 1875.

Petalophthalmus pacificus Faxon 1893.

Type locality: Tropical Atlantic (2°25′N, 20°1′W). Distribution: Bering Sea; central California; Gulf of California; Mexico; Gulf of Panama; Gulf of Mexico; Ireland; Morocco; South Africa; Gulf of Aden; Laccadive Sea; India; Hawaii; 900–4500 m.

Superorder Eucarida

Order Euphausiacea—The Krill

The euphausiids (krill) are important in the food chain. They can occur in huge schools and provide a major source of food for larger nektonic animals (baleen whales, squids, fishes) and even some marine birds. There are about 87 extant species (Ahyong et al., 2011), with approximately 14 species known from Alaskan waters (Table 1). Keys, synoptic descriptions, and illustrations are included in a handbook to mysids and euphausiids from northern California through southern Alaska (Kathman et al., 1986). A key to identify Arctic species can be found in Vassilenko and Petryashov (2009). Sources used to compile information for the list of euphausiids include Boden et al. (1955), Nemoto (1963), and Ponomareva (1963).

Family Bentheuphausiidae

Bentheuphausia amblyops G. O. Sars, 1885.

Thysanopoda ? amblyops Sars 1883.

Type locality: Eastern North Atlantic. Distribution: Widely distributed, between 54°N and 54°S in the Pacific, between 64°N and 44°S in the Atlantic; tropical Indian Ocean basins; bathypelagic.

Family Euphausiidae

Euphausia pacifica Hansen, 1911.

Type locality: Unknown. Distribution: Bering Sea to Baja California; western North Pacific; upper 300 m.

Nematobrachion flexipes (Ortmann, 1893).

Stylocheiron flexipes Ortmann 1893; *Nematodactylus flexipes*: Calman 1896.

Type locality: Not traced. Distribution: Southern Alaska to Baja California; Atlantic and Indian oceans; 100–700 m; rare.

Stylocheiron longicorne G. O. Sars, 1883.

Stylocheiron mastigophorum Chun 1896 (in part); *Stylocheiron suhmii* Ortmann 1905 (in part).

Type locality: Not traced. Distribution: ?Southern Alaska to Baja California; Atlantic and Indian oceans; 100–500 m.

Stylocheiron maximum Hansen, 1908.

Type locality: Not traced. Distribution: Southern Alaska to Baja California; Atlantic and Indian oceans; below 500 m.

Tessarabrachion oculatum Hansen, 1911.

Type locality: Unknown. Distribution: Aleutian Islands south to central California; Sea of Japan; to depths of 1000 m.

Thysanoessa inermis (Kröyer, 1846).

Thysanopoda inermis Kröyer 1846; *Thysanopoda neglecta* Kröyer 1846; *Thysanoessa arberdonensis* Sim 1872; *Rhoda inermis*: Sim 1872; *Euphausia inermis*: G. O. Sars 1883; *Boreophausia inermis*: G. O. Sars 1886.

Type locality: Spitsbergen. Distribution: Arctic Ocean south to Oregon in the eastern North Pacific and Sea of Japan in the western North Pacific; south to the Gulf of Maine in the western North Atlantic and the English Channel in the eastern North Atlantic; to depths of approximately 300 m.

Thysanoessa inspinata Nemoto, 1963.

Thysanoessa longipes spineless form: Banner 1950, Boden et al. 1955, Nemoto 1957, Ponomareva 1957, Komaki 1960, Brinton 1962.

Type locality: 52°N, 167°E (central North Pacific, just south of the Aleutian Islands). Distribution: North Pacific, south of 50°N in the Gulf of Alaska and west to the Sea of Japan; to depths of approximately 500 m.

Thysanoessa longipes Brandt, 1851.

Thysanoessa gregaria: Hansen 1915; *Thysanoessa armata*: Marukawa 1928.

Type locality: Sea of Okhotsk. Distribution: Eastern Chukchi Sea south to California and the Sea of Japan; 0–500 m.

Thysanoessa raschii (M. Sars, 1864).

Thysanopoda raschii M. Sars 1864; *Rhoda jardineana* Sim 1872; *Euphausia raschii*: G. O. Sars 1883; *Boreophausia raschii*: Norman 1886; non *Thysanopoda raschii*: Vanhoffen 1897.

Type locality: Not traced. Distribution: Arctic Ocean south to Oregon and the Sea of Japan in the North Pacific; North Atlantic, from eastern North Scotland to the Barents Sea, west to the Gulf of Maine and Hudson and Baffin Bays; Beaufort Sea; 0–1000 m.

Thysanoessa spinifera Holmes, 1900.

Type locality: California. Distribution: Eastern North Pacific from the Bering Sea to Baja California; to depths of 300 m.

Thysanopoda acutifrons Holt and Tattersall, 1905.

Thysanopoda pectinata: Hansen 1905; *Thysanopoda johnstoni* Sheard 1942 (*fide* Brinton 1962); *Thysanopoda dubia* Banner 1950 (*fide* Brinton 1962).

Type locality: Eastern North Atlantic slope. Distribution: Eastern North Pacific from Alaska to California; South Pacific; Atlantic and Indian oceans; to depths of approximately 700 m.

Thysanopoda cornuta Illig, 1905.

Thysanopoda insignis: Hansen 1905.

Type locality: Tropical Atlantic. Distribution: Gulf of Alaska to Mexico; Atlantic and Indian oceans; 1000 m or deeper.

Thysanopoda egregia Hansen, 1905.

Type locality: 30°41′N, 17°46′W. Distribution: Cosmopolitan, including the Gulf of Alaska; adults found below 2000 m, larvae and juveniles below 200 m.

Order Decapoda—The Shrimps, Crabs, and Lobsters

The decapods are among the most familiar crustaceans and include the shrimps, crabs, and lobsters. There are about 14,908 extant decapod species (Ahyong et al., 2011), with approximately 203 species occurring in Alaskan marine waters (Table 1). The higher classification follows Ahyong et al. (2010) and De Grave et al. (2009, 2014). We follow McLaughlin et al.'s (2007) recognition of the Hapalogastridae as a clade of northern soft-abdomen "lithodids," and Chan et al's (2010) splitting of the caridean shrimp family Oplophoridae *sensu lato* into the Oplophoridae *sensu stricto* and Acanthephyridae. A key to identify Arctic species of shrimps and crabs can be found in Vassilenko and Petryashov (2009).

Two taxa were not included in this list despite their inclusion in Clark[2]. According to Clark[2], the caridean shrimp *Pandalopsis* cf. *lamelligera* is distributed from the western Pacific (type locality of *P. lamelligera* = Kamchatka) to the Aleutian Islands. We were unable to find any records of this species in Alaska, but it is possible that it occurs there. *Munidopsis quadrata* is listed by Clark[2] as occurring in the Gulf of Alaska, but Wicksten (2012) lists the northernmost record to be from British Columbia.

Several sources of primary and secondary literature were used to compile the information for the list of decapods: Rathbun (1902, 1904), McLaughlin (1974), Butler (1980), Holthuis (1980), Krygier and Forss (1981), Wicksten (1982, 1984, 2011, 2012), Wicksten and Mendez (1982), Crosnier (1987), Jensen and Armstrong (1987), Williams et al. (1989), Squires (1990, 1992), Komai (1993, 1994, 1997, 1999), Jensen (1995, 2004, 2006, 2014), Kikuchi and Ohta (1995), Wicksten et al. (1996), Nizinski (2003), Stamatiou and Jensen (2004), Ng et al. (2008), and De Grave and Fransen (2011). A database of systematic literature on the Decapoda, including publicly available pdf files, can be found at http://decapoda.nhm.org/references.

Suborder Dendrobranchiata

Superfamily Penaeoidea

Family Benthesicymidae

Bentheogennema borealis (Rathbun, 1902). Northern blunt-tailed shrimp.

Gennadas borealis Rathbun 1902.

Type locality: Copper Island, Kamchatka. Distribution: Bering Sea east of Kamchatka and north of Rat Islands, Aleutian Islands, to Mexico; 200–2866 m.

Bentheogennema burkenroadi Krygier and Wasmer, 1975. Burkenroad's blunt-tailed shrimp.

Type locality: British Columbia, Canada (51°26′N, 138°28′W). Distribution: Southern Alaska to Baja California, Mexico; surface to 1000 m.

Superfamily Sergestoidea

Family Sergestidae

Eusergestes similis (Hansen, 1903). Pacific sergestid.

Sergestes similis Hansen 1903.

Type locality: Japan. Distribution: North Pacific Ocean, east coast of Honshu Island to southwestern Bering Sea; Gulf of Alaska to Gulf of California; surface to 1200 m.

Suborder Pleocyemata

Infraorder Caridea

Superfamily Alpheoidea

Family Alpheidae

Betaeus harrimani Rathbun, 1904. Northern hooded shrimp.

Type locality: Sitka, Alaska. Distribution: Southeast Alaska to Newport Bay, California; intertidal zone, usually found in the burrows of the blue mud shrimp, *Upogebia pugettensis*, and sometimes with the bay ghost shrimp, *Neotrypaea californiensis*.

Family Bythocaridae

?***Bythocaris curvirostris*** Kobyakova, 1957

Type locality: Not traced. Distribution: Arctic bathyal; Chukchi and Laptev seas; 856–3440 m.

?***Bythocaris leucopis*** G. O. Sars, 1879.

Type locality: Between Jan Mayen and Finnmark. Distribution: Arctic bathyal; Chukchi, Barents, Laptev, and East Siberian seas; 650–2850 m.

Family Thoridae

Eualus avinus (Rathbun, 1899). Beaked eualid.

Spirontocaris avina Rathbun 1899.

Type locality: Pribilof Islands, Bering Sea. Distribution: Pribilof Islands to Oregon; 46–642 m.

Eualus barbatus (Rathbun, 1899). Barbed eualid.

Spirontocaris barbata Rathbun 1899.

Type locality: Pribilof Islands, Bering Sea. Distribution: Pribilof Islands to Heceta Bank, Oregon; 82–507 m.

Eualus berkeleyorum Butler, 1971. Berkeleys' eualid.

Type locality: Strait of Georgia. Distribution: Pribilof Islands to Trinidad Harbor, Humboldt County, California; 46–384 m.

Eualus biunguis (Rathbun, 1902). Deepsea eualid.

Spirontocaris biunguis Rathbun 1902.

Type locality: Cape St. James, Queen Charlotte Islands, British Columbia, Canada. Distribution: Bering Sea to Oregon; Okhotsk Sea; Sea of Japan to Sado Island; Peter the Great Bay; 90–2090 m.

Eualus butleri Jensen, 2004. Sponge eualid.

Eualus pusiolus: Butler 1980.

Type locality: Gastineau Channel, Juneau, Alaska. Distribution: Adak, Alaska, to Hood Canal, Puget Sound, Washington; 18–241 m.

Remarks: This species is commensal inside hexactinellid sponges.

Eualus fabricii (Krøyer, 1841). Arctic eualid.

Hippolyte fabricii Krøyer 1841; *Spirontocaris fabricii* Rathbun 1904.

Type locality: North Atlantic. Distribution: Eastern North Pacific from Arctic Alaska to British Columbia; western North Pacific in Sea of Japan and Okhotsk Sea; western North Atlantic from Foxe Basin and western Greenland to Massachusetts Bay; 4–255 m.

Eualus gaimardii (H. Milne Edwards, 1837). Circumpolar eualid.

Hyppolite gaimardii H. Milne Edwards 1837; *Eualus obsus* Thallwitz 1892.

Type locality: Not traced. Distribution: Circumpolar; Beaufort Sea; Chukchi Sea; Bering Sea south to Sitka, Alaska; West Greenland to Cape Cod; West Norway to northern Britain; White Sea; Barents Sea; 10–200 m.

Eualus lineatus Wicksten and Butler, 1983. Striped eualid.

Spirontocaris herdmani: Rathbun 1904 (in part, non *Spirontocaris herdmani* Walker 1898); *Eualus herdmani*: Holthuis 1947 (in part), Kozloff 1974, Butler 1980 (in part).

Type locality: Southwest of Gull Island, off Santa Cruz Island, California. Distribution: Naha Bay, Alaska, to Santa Cruz Island; 12–232 m.

Eualus macilentus (Krøyer, 1841). Greenland shrimp.

Hippolyte macilenta Krøyer 1841; *Spirontocaris stoneyi* Rathbun 1902; *Eualus stoneyi* (Rathbun 1902); *Spirontocaris* *macilenta* Rathbun 1904; *Spirontocarella macilenta* Brashnikov 1907.

Type locality: Greenland. Distribution: Western North Atlantic: West Greenland to Nova Scotia (Canada); northern Pacific: Bering Sea to Okhotsk Sea; Chukchi Sea; 20–540 m.

Eualus macrophthalmus (Rathbun, 1902). Large-eyed eualid.

Spirontocaris macrophthalma Rathbun 1902.

Type locality: Tawhit Head, Washington. Distribution: Unalaska to Point Sur, California; 110–1163 m.

Eualus pusiolus (Krøyer, 1841). Doll eualid.

Hippolyte pusiola Krøyer 1841; *Spirontocaris pusiola* Rathbun 1904.

Type locality: Greenland. Distribution: Bering Sea to Puget Sound; Sea of Japan; North Atlantic; 55–110 m.

Eualus suckleyi (Stimpson, 1864). Short-scaled eualid.

Hippolyte suckleyi Stimpson 1864; *Spirontocaris suckleyi* Rathbun 1904.

Type locality: Puget Sound, Washington. Distribution: Chukchi Sea; Bering Sea to Grays Harbor off Washington; Okhotsk Sea; 11–1025 m.

Eualus townsendi (Rathbun, 1902). Townsend's eualid.

Spirontocaris gaimardii Rathbun 1899 (in part); *Spirontocaris townsendi* Rathbun 1902.

Type locality: Puget Sound, Strait of Juan de Fuca. Distribution: Pribilof Islands to Puget Sound; Sea of Japan and Okhotsk Sea; northeastern Honshu; 38–630 m.

Heptacarpus brevirostris (Dana, 1852). Stout coastal shrimp.

Hippolyte brevirostris Dana 1852; *Spirontocaris brevirostris* Walker 1898.

Type locality: Dungeness, Strait of Juan de Fuca. Distribution: Attu, Aleutian Islands, to Santa Cruz County, California; intertidal zone to 128 m; common.

Heptacarpus camtschaticus (Stimpson, 1860). Northern coastal shrimp.

Hippolyte camtschatica Stimpson 1860; *Spirontocaris camtschatica* Rathbun 1904.

Type locality: Kamchatka Peninsula. Distribution: Cape Lisburne, Chukchi Sea; Bering Sea to Strait of Georgia; Okhotsk Sea; Sea of Japan, to Peter the Great Bay; Tokyo Bay; intertidal zone to 108 m.

Heptacarpus carinatus Holmes, 1900. Small-eyed coastal shrimp.

Spirontocaris carinata Rathbun 1904.

Type locality: Monterey Bay, California. Distribution: Dixon Harbor, southeastern Alaska to Point Loma, California; intertidal zone to 27 m.

?***Heptacarpus decorus*** (Rathbun, 1902). Elegant coastal shrimp.

Spirontocaris decora Rathbun 1902.

Type locality: Santa Cruz Island, California. Distribution: ?Southern Alaska to San Diego, California; 22–313 m.

Heptacarpus flexus (Rathbun, 1902). Slenderbeak coastal shrimp.

Spirontocaris flexa Rathbun 1902.

Type locality: North of Bird Island, Shumagin Islands, Alaska. Distribution: Chukchi and Bering seas to Drakes Bay, California; 18–170 m.

Heptacarpus maxillipes (Rathbun, 1902). Aleutian coastal shrimp.

Spirontocaris maxillipes Rathbun 1902.

Type locality: Off Seguam Island, Aleutian Islands. Distribution: Bering Sea to Oregon; 640–1143 m.

Heptacarpus moseri (Rathbun, 1902). Alaska coastal shrimp.

Spirontocaris moseri Rathbun 1902.

Type locality: Off Seguam Island, Aleutian Islands. Distribution: Pribilof Islands, Bering Sea to Destruction Island, Washington; among algae, to 1100 m.

Remarks: Komai (1993) believed that a previous intertidal record (Hart, 1930, cited by Butler, 1980) is a misidentification.

Heptacarpus paludicola Holmes, 1900. California coastal shrimp.

Spirontocaris paludicola: Rathbun 1904, Schmitt 1921, Johnson and Snook 1927.

Type locality: California (Humboldt Bay; Shelter Cove; Bodega Bay). Distribution: Gulf of Alaska to San Diego, California; intertidal zone to 10 m.

Heptacarpus sitchensis (Brandt, 1851). Common coastal shrimp.

Hippolyte sitchensis Brandt 1851; *Hippolyte picta* Stimpson 1871; *Spirontacaris picta*: Rathbun 1904; *Spirontocaris sitchensis*: Rathbun 1904; *Heptacarpus littoralis* Butler 1980; *Heptacarpus pictus* (Stimpson 1871): Wicksten et al. 1996.

Type locality: Sitka, Alaska. Distribution: Resurrection Bay, Alaska, to Yaquina Bay, Oregon; and Duxbury Reef, Marin County, California, to Punta Banda, Baja California, Mexico; intertidal zone to 15 m.

Heptacarpus stimpsoni Holthuis, 1947. Stimpson's coastal shrimp.

Hippolyte cristata Stimpson 1860 (non *Hippolyte cristatus* De Haan 1849); *Heptacarpus cristatus*: Holmes 1900; *Spirontocaris cristata*: Rathbun 1904.

Type locality: San Francisco, California. Distribution: Sheep Bay, Alaska, to Todos Santos Bay, Point Abreojos, and Rosario Bay, Baja California; intertidal zone to 100 m.

Heptacarpus stylus (Stimpson, 1864). Stiletto coastal shrimp.

Hippolyte stylus Stimpson 1864; *Hippolyte esquimaltiana* Bate 1864; *Spirontocaris stylus* Rathbun 1904.

Type locality: Puget Sound, Washington. Distribution: Chichagof Island, Alaska. to Puget Sound; intertidal zone to 439 m.

Heptacarpus tenuissimus Holmes, 1900. Slender coastal shrimp.

Hippolyte gracilis Stimpson 1864 (non *Hippolyte gracilis* Lilljeborg 1850); *Spirontocaris gracilis*: Rathbun 1904; *Heptacarpus gracilis*: Carlton and Kuris 1975.

Type locality: Puget Sound, Washington. Distribution: Bird Island, Alaska, to Santa Catalina Island, California; intertidal zone to 137 m.

Heptacarpus tridens (Rathbun, 1902). Three-spined coastal shrimp.

Spirontocaris tridens Rathbun 1902.

Type locality: Admiralty Inlet, Puget Sound, Washington. Distribution: Aleutian Islands to Cape Flattery, Washington; intertidal zone to 110 m.

Hippolyte clarki Chace, 1951. Grass shrimp.

Type locality: Friday Harbor, Washington. Distribution: Sheep Bay, Alaska, to Santa Catalina Island, California; intertidal zone to 30 m.

Lebbeus acudactylus Jensen, 2006.

Type locality: Aleutian Islands (51.86°N, 174.92°W). Distribution: Aleutian Islands and the Gulf of Alaska; 150–170 m.

Lebbeus brandti (Bražnikov, 1907).

Hetairus brandti Brazhnikov 1907.

Type locality: Sea of Okhotsk. Distribution: Smeaton Arm, Wilson Bay, Alaska; Sagami Bay, Japan; Sea of Okhotsk; 10–172 m.

Remarks: There is an unverified report from Norton Sound.

Lebbeus grandimanus (Bražnikov, 1907). Candy stripe shrimp.

Hetairus grandimanus Brazhnikov 1907; *Spirontocaris grandimana* Vinogradov 1947; *Hetairus grandimana*: Kobyakova 1958.

Type locality: Russian eastern seas. Distribution: Bering Sea, Commander Islands, Pribilof Islands, to San Juan Islands, Washington, and Race Rocks, Vancouver Island, British Columbia; Okhotsk Sea; Sea of Japan to Peter the Great Bay; 6–180 m.

Lebbeus groenlandicus (J. C. Fabricius, 1775). Spiny lebbeid.

Astacus groenlandicus Fabricius 1775; *Spirontocaris groenlandica* Walker 1898.

Type locality: Greenland. Distribution: Chukchi Sea; Bering Sea to Puget Sound; Arctic coast of Canada; Greenland to Cape Cod; Okhotsk Sea; Sea of Japan to Peter the Great Bay; 11–518 m; common.

Lebbeus mundus Jensen, 2006. Cleaner lebbeid.

Lebbeus schrencki: Butler 1980 (in part), Jensen and Armstrong 1987.

Type locality: Willis Point, Vancouver Island, British Columbia, Canada. Distribution: Pribilof Islands, Alaska, to Octopus Hole, Hood Canal, Washington; 9–134 m.

Lebbeus polaris (Sabine, 1824). Polar lebbeid.

Alphaeus polaris Sabine 1824; *Lebbeus orthorhynchus* White 1847.

Type locality: Coast of Melville Island, Arctic Canada. Distribution: Circumpolar; eastern North Pacific: Bering Sea and the Aleutian Islands; western North Pacific: Okhotsk Sea; eastern and western North Atlantic; intertidal zone to 930 m.

Lebbeus unalaskensis (Rathbun, 1902).

Spirontocaris unalaskensis Rathbun 1902.

Type locality: North of Unalaska Island, Aleutian Islands. Distribution: Known only from type locality; 640 m.

Lebbeus vicinus (Rathbun, 1902). Offshore lebbeid.

Spirontocaris vicina Rathbun 1902.

Type locality: North of Unalaska Island, Aleutian Islands. Distribution: Aleutian Islands to the Gulf of California; 565 m.

Lebbeus washingtonianus (Rathbun, 1902). Slope lebbeid.

Spirontocaris washingtoniana Rathbun 1902.

Type locality: Sea Lion Rock, Washington. Distribution: Western Aleutian Islands to Guaymas Basin, Gulf of California; Iheya Ridge, north of Naha, Okinawa; 460–1808 m.

Remarks: This species was recently discovered in the Aleutians (Drumm et al., 2013).

Spirontocaris arcuata Rathbun, 1902. Rathbun's bladed shrimp.

Type locality: Washington Sound, Strait of Juan de Fuca. Distribution: Canadian Arctic; Chukchi Sea; Gulf of Anadyr to Strait of Juan de Fuca; Okhotsk Sea; Sea of Japan; 5–641 m; common.

Spirontocaris dalli Rathbun, 1902. Dall blade shrimp.

Type locality: Coal Harbor, Unga Island, Alaska. Distribution: Southeastern Chukchi Sea to Gulf of Alaska; Aleutian Islands; 10–56 m.

Spirontocaris holmesi Holthuis, 1947. Slender bladed shrimp.

Spirontocaris bispinosa Holmes 1900 (non *Hippolyte bispinosa* De Haan 1841).

Type locality: Puget Sound. Distribution: Yes Bay, Alaska, to San Diego, California; 24–485 m.

Spirontocaris intermedia Kobjakova, 1936.

Spirontocaris spina intermedia Kobyakova 1936; *Spirontocaris spina*: Urita 1942, Miyake 1982; *Spirontocaris spinus* var. *intermedia*: Holthuis 1947.

Type locality: Sea of Okhotsk. Distribution: Pacific high boreal, including southern Chukchi and Beaufort seas to British Columbia; 27–245 m.

Remarks: Hayashi (1977) synonymized this species with *S. spinus*. Komai and Komatsu (2009) also questioned its validity. It is recognized as valid in Vassilenko and Petryashov (2009).

Spirontocaris lamellicornis (Dana, 1852). Dana's bladed shrimp.

Hippolyte lamellicornis Dana 1852.

Type locality: Dungeness, Strait of Juan de Fuca. Distribution: Commander Islands and Bering Sea to Santa Monica Bay, California; 3–192 m.

Spirontocaris liljeborgii (Danielssen, 1859). Friendly spine shrimp.

Hippolyte lilljeborgii Danielssen 1859; *Hippolyte securifrons* Norman 1862; *Spirontocaris securifrons*: Norman 1893.

Type locality: North Atlantic. Distribution: Arctic Alaska; Iceland; Greenland; Nova Scotia to Massachusetts Bay; Barents Sea south to south coast of England; 20–1200 m.

Spirontocaris murdochi Rathbun, 1902. Murdoch blade shrimp.

Hippolyte spinus Murdoch 1885 (non *Cancer spinus* Sowerby).

Type locality: Robben Island, east coast of Sakhalin, Okhotsk Sea. Distribution: East coast of Kamchatka and Arctic coast of Alaska; 12–244 m.

Spirontocaris ochotensis (Brandt, 1851). Oval bladed shrimp.

Hippolyte ochotensis Brandt 1851.

Type locality: Not traced. Distribution: Bering Sea to Vancouver Island; Japan; coast of Siberia; intertidal zone to 247 m.

Spirontocaris phippsii (Krøyer, 1841). Punctate blade shrimp.

Hippolyte phippsii Krøyer 1841; *Hippolyte turgida* Krøyer 1841; *Hippolyte vibrans* Stimpson 1871.

Type locality: North Atlantic. Distribution: Circumpolar; Arctic Alaska to the Shumagins; Atlantic coast of America southward to Cape Cod; northern Europe; 10–230 m.

Spirontocaris prionota (Stimpson, 1864). Deep-bladed shrimp.

Hippolyte prionota Stimpson 1864; *Spirontocaris macrodonta* Hart 1930.

Type locality: Puget Sound, Washington. Distribution: Eastern Chukchi Sea (senior author, personal observ.); Nunivak Island, Bering Sea; Bering Island, Commander Islands; Aleutian Islands and Gulf of Alaska to Todos Santos Bay, Baja California, Mexico; intertidal zone to 202 m.

Spirontocaris snyderi Rathbun, 1902. Snyder's bladed shrimp.

Type locality: Monterey Bay, California. Distribution: ?Southeast Alaska to Cedros Island, Baja California, Mexico; 4–355 m.

Spirontocaris spinus (Sowerby, 1805). Parrot shrimp.

Cancer spinus Sowerby 1805; *Alpheus spinus*: Leach 1814; *Hippolyte Sowerbei* Leach 1817; *Hippolite sowerbei*: J.C. Ross 1835; *Hippolyte spinus*: White 1847; *Hippolyte spina*: Stimpson 1860.

Type locality: Europe. Distribution: Circumpolar; Arctic Alaska, Bering Strait to Lituya Bay in Southeast Alaska; Sea of Japan; Sea of Okhotsk; western North Atlantic south to Massachusetts Bay; northern Europe; 9–166 m.

Remarks: This species seems to have a lot of character overlap with *S. arcuata*, and there are inconsistencies among the various references in the diagnostic features used to distinguish these two species (Jensen[14]).

Spirontocaris truncata Rathbun, 1902. Blunt blade shrimp.

Type locality: Hecata Bank, Oregon. Distribution: Gulf of Alaska to Oregon; ?Baja California, Mexico; 30–92 m.

Superfamily Crangonoidea

Family Crangonidae

Argis alaskensis (Kingsley, 1883). Common argid.

Nectocrangon alaskensis Kingsley 1883.

Type locality: Marmot Island, Kodiak Archipelago, Alaska. Distribution: Pribilof Islands, Bering Sea, to Oregon; 18–221 m; common.

Argis crassa (Rathbun, 1899). Rough argid.

Nectocrangon crassa Rathbun 1899.

Type locality: Pribilof Islands. Distribution: Chukchi Sea (senior author, personal observ.); St. Lawrence Island, Bering Sea; Okhotsk Sea; Sea of Japan; Aleutian Islands to San Juan Islands; 4–125 m.

Argis dentata (Rathbun, 1902). Arctic argid.

Nectocrangon dentata Rathbun 1902.

Type locality: Sitkalidak Island, Alaska. Distribution: Chukchi Sea to Sitka, Alaska; southeast coast of Kamchatka, northern part of the Okhotsk Sea; Smith Sound, western North Greenland through Arctic Canadian islands to Dease Strait and southward to southwest of Nova Scotia; subtidal zone to about 200 m; common.

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[14] Jensen, G. 2012. Personal commun. University of Washington. School of Aquatic and Fishery Science, Seattle, WA 98195.

Argis lar (Owen, 1839). Northern argid.

Crangon lar Owen 1839; *Nectocrangon lar*: Stimpson 1860.

Type locality: Between Bristol Bay and the Pribilof Islands. Distribution: Chukchi Sea; Bering Sea to Strait of Georgia; Okhotsk Sea; Sea of Japan; 10–280 m; common.

Argis levior (Rathbun, 1902). Nelson's argid.

Nectocrangon levior Rathbun 1902.

Type locality: Admiralty Inlet, Puget Sound, Washington. Distribution: Aleutian Islands to Shelter Cove, Humboldt County, California; 18–80 m.

Argis ovifer (Rathbun, 1902). Split-eye argid.

Nectocrangon ovifer Rathbun 1902.

Type locality: Trinity Islands, Alaska. Distribution: North of Pribilof Islands, Bering Sea, to Queen Charlotte Sound, British Columbia; northern Okhotsk Sea; 102–673 m.

Crangon alaskensis Lockington, 1877. Northern crangon.

Crangon alaskensis elongata Rathbun 1902; *Crago alaskensis elongata*: Schmitt 1921; *Crago alaskensis*: MacGinitie and MacGinitie 1968.

Type locality: Mutiny Bay, Alaska. Distribution: Bering Sea to Todos Bay, Baja California; Kuril Islands; intertidal zone to 275 m.

?***Crangon alba*** Holmes, 1900.

Crago alba: Schmitt 1921.

Type locality: Monterey Bay, California. Distribution: ?Gulf of Alaska to Todos Santos Bay, Baja California; 22–88 m.

Remarks: There are unverified records of this species in the Gulf of Alaska (CAS 172926). Wicksten (2012) listed the northern-most locality in Queen Charlotte Sound, Vancouver Island.

Crangon dalli Rathbun, 1902. Ridged crangon.

Type locality: Bering Sea, off Cape Seniavin, Alaska. Distribution: Chukchi Sea; Bering Sea to Puget Sound, Washington; Okhotsk Sea; Sea of Japan; east coast of Japan; 3–630 m; common.

Crangon franciscorum Stimpson, 1856. Bay crangon.

Crago franciscorum: Schmitt 1921; *Crangon (Neocrangon) franciscorum*: Zarenkov 1963; *Crangon franciscorum franciscorum*: Butler 1980.

Type locality: San Francisco Bay, California. Distribution: Resurrection Bay, Alaska, to San Diego, California; intertidal zone to 91 m.

Crangon franciscorum angustimana Rathbun, 1902. Long-clawed crangon.

Type locality: Chuckanut Island, Bellingham Bay, Washington. Distribution: Kachemak Bay, Alaska, to Tillamook Rock, Oregon; 18–183 m.

Crangon nigricauda Stimpson, 1856. Sand crangon.

Crago nigricauda: Schmitt 1921; *Crangon (Neocrangon) nigricauda*: Zarenkov 1965.

Type locality: Tomales Bay, California. Distribution: Prince William Sound to San Geronimo Island, Baja California, Mexico; intertidal zone to 57 m.

?***Crangon septemspinosa*** Say, 1818. Sevenspine bay shrimp.

Crangon septemspinosus Say 1818; *Crago septemspinosus*: Rathbun 1905.

Type locality: Western North Atlantic (bay shores and inlets of the sea). Distribution: Baffin Bay to east coast of Florida; ?Arctic coast of Alaska at Eschscholtz Bay southward along the eastern shore of the Bering Sea to the Shumagins; ?western North Pacific; intertidal zone to 440 m.

Remarks: Holthuis (1980:151) stated, "A thorough revision of the genus will show the relation between the various forms and also make certain whether or not C. *septemspinosa* does occur in both sides of the northern Pacific as some authors think." Squires (1990) restricted the geographic range to the North Atlantic but did not explain why. The species has been reported from the Russian Far East but those records are now assigned to *C. amurensis* Brashnikov, 1907 (Hayashi and Kim, 1999). There is evidence from molecular data that specimens identified as *C. septemspinosa* from the Chukchi Sea represent a cryptic species (Drumm et al.[15]).

Lissocrangon stylirostris (Holmes, 1900). Smooth crangon.

Crangon stylirostris Holmes 1900; *Crago stylirostris*: Schmitt 1921.

Type locality: Trinidad, Humboldt County, California. Distribution: Chirikof Island, Alaska, to Todos Santos Bay, Baja California; intertidal zone to 80 m.

Mesocrangon intermedia (Stimpson, 1860). Northern spinyhead.

Crangon intermedia Stimpson 1860; *Crangon tenuifrons* Kingsley 1882; *Crago intermedia*: Schmitt 1921.

Type locality: Bering Sea near Cape Zhupanovsky. Distribution: Chukchi and Bering seas; Aleutian Islands south to Vancouver Island; Kamchatka; 16–183 m.

Metacrangon acclivis (Rathbun, 1902). Forked spinyhead.

Crangon acclivis Rathbun 1902; *Crago acclivis*: Schmitt 1921.

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[15] Drumm, D., M. Canino, T. Buckley, and M. Paquin. 2014. DNA barcoding analysis of marine caridean shrimps from Alaska. Alaska Marine Science Symposium, January 20–24, 2014, Anchorage, Alaska.

Type locality: Santa Cruz Island, California. Distribution: Trinity Islands, Alaska, to southern California; 146–487 m.

Metacrangon munita (Dana, 1852). Coastal spinyhead.

Crangon munitus Dana 1852; *Crangon munita*: Rathbun 1904; *Crangon (Sclerocrangon) munitus*: Ortmann 1895; *Sclerocrangon munita*: De Man 1920; *Crago munita*: Schmitt 1921.

Type locality: Puget Sound. Distribution: Port Etches, Alaska, to San Miguel Island, California; 13–230 m.

Metacrangon spinirostris (Rathbun, 1902).

Crangon spinirostris Rathbun 1902.

Type locality: North of Unalaska, Aleutian Islands. Distribution: Bering Sea; Aleutian Islands; 497–1125 m.

Metacrangon variabilis (Rathbun, 1902). Deepsea spinyhead.

Crangon variabilis Rathbun 1902; *Crago variabilis*: Schmitt 1921.

Type locality: North Head, Akutan Island, Aleutian Islands. Distribution: Commander Islands; Pribilof Islands, Bering Sea, to San Nicolas Island, California; 92–1271 m; common.

Neocrangon abyssorum (Rathbun, 1902). Abyssal crangon.

Crangon abyssorum Rathbun 1902; *Crago abyssorum*: Schmitt 1921.

Type locality: Bering Sea, southwest of Pribilof Islands. Distribution: Bering Sea to Cortes Bank, California; east of Kuril Islands; east coast of Japan; 97–2975 m.

Neocrangon communis (Rathbun, 1899). Common two-spined crangon.

Crangon communis Rathbun 1899; *Crago communis*: Schmitt 1921; *Sclerocrangon communis*: Derjugin and Kobjakowa 1935; *Crangon (Neocrangon) communis*: Zarenkov 1965; *Neocrangon resima*: Green and Butler 1988 (misidentification).

Type locality: Pribilof Islands, Bering Sea. Distribution: Chukchi Sea; Bering Sea to San Diego, California; Sea of Japan and east coast of Honshu Island; 16–1537 m; common.

?Neocrangon resima (Rathbun, 1902).

Crangon resima Rathbun 1902; *Crago zacae* Chace 1937; *Crangon zacae*: Word and Charwat 1976; *Neocrangon zacae*: Kuris and Carlton 1977.

Type locality: San Diego, California. Distribution: ?Southern Alaska to Baja California; 80–486 m; rare.

Remarks: Records in Alaska may be in error. Some *N. communis* have a lamellate rostrum and have been misidentified as *N. resima* (as by Green and Butler, 1988).

Paracrangon echinata Dana, 1852. Horned shrimp.

Paracrangon echinatus Dana 1852.

Type locality: Puget Sound. Distribution: Port Etches, Alaska, to La Jolla, California; Sea of Okhotsk, Sea of Japan to Korea Strait, Sagami Bay; 7–201 m.

Rhynocrangon alata (Rathbun, 1902). Saddle-back shrimp.

Sclerocrangon alata Rathbun 1902.

Type locality: Admiralty Inlet, Puget Sound, Washington. Distribution: Bering Sea, Akutan Island, to Santa Barbara Channel, California; Peter the Great Bay, Russia; 11–167 m.

Rhynocrangon sharpi (Ortmann, 1896). Spiked shrimp.

Paracrangon echinatus Sharp 1893 (non Dana); *Crangon (Sclerocrangon) sharpi* Ortmann 1896.

Type locality: Marmot Island, Kodiak Archipelago, Alaska. Distribution: Bering Sea, Aleutian Islands, and along the Alaska Peninsula; Hokkaido, Japan; Miyako; 64–274 m; common.

Sabinea septemcarinata (Sabine, 1824).

Crangon septemcarinata Sabine 1824.

Type locality: West coast of Davis Strait. Distribution: Arctic Alaska and Canada to Point Barrow and Chukchi Sea; western Atlantic: Hudson Bay and Greenland to Massachusetts Bay; Arctic-North Atlantic: Iceland, Kara, White and Barents seas; Wrangel Island; eastern Atlantic: North of Faroe Islands; Norway; British Isles; to a depth of over 400 m; common.

Sclerocrangon boreas (Phipps, 1774). Sculptured shrimp.

Cancer boreas Phipps 1774; *Crangon boreas*: Sabine 1821.

Type locality: Near the coast of Spitsbergen. Circumboreal. Distribution: North Atlantic: Arctic Canada, south to Cape Cod; Arctic Europe, Novaya Zemlya, Spitsbergen, Iceland, Greenland, to Faroe Islands and northern Norway; North Pacific: Chukchi Sea; Bering Sea to Bare Island, Washington; Okhotsk Sea; Sea of Japan, to Maritime Territory; intertidal zone to 366 m; common.

Sclerocrangon ferox (G. O. Sars, 1877).

Cheraphilus ferox G. O. Sars 1877.

Type locality: Norway. Distribution: High boreal Arctic; Chukchi Sea; 34–1000 m.

Superfamily Oplophoroidea

Family Acanthephyridae

Acanthephyra chacei Krygier and Forss, 1981.

Type locality: Oregon. Distribution: Southern Alaska and Oregon; 1500–3900 m.

Hymenodora frontalis Rathbun, 1902. Pacific ambereye.
Type locality: West of Unalaska. Distribution: Pribilof Islands, Bering Sea, to San Clemente Island, California; Okhotsk Sea; 200–3000 m.

Hymenodora glacialis (Buchholz, 1874). Northern ambereye.

Pasiphae glacialis Buchholz 1874; *Hymenodora glauca* Spence Bate 1888; *Hymenodora mollicutis* Spence Bate 1888.

Type locality: Greenland. Distribution: North Pacific; Bering Sea to Gulf of California; North Atlantic; Arctic waters: northern Norway to Bay of Biscay, Faroe Channel, West Ireland; mesopelagic, but also found in the top 100 m.

Notostomus japonicus Bate, 1888. Spiny ridge shrimp.
Type locality: Honshu Island, Japan. Distribution: Alaska to Oregon; Hawaii; Japan; 450–5380 m.

Family Oplophoridae

Systellaspis braueri paucispinosa Crosnier, 1987. Quale's spinytail.

Systellaspis braueri: Butler 1980, Krygier and Pearcy 1981.

Type locality: East of Japan (31°59′08″N, 158°04′04″E). Distribution: Bering Sea (just north of Aleutian Islands) south to Central America; western North Pacific; South Pacific; Indonesia; 500–2000 m.

Remarks: This species was recently discovered in the Aleutian Islands (Drumm et al., 2013).

Superfamily Pandaloidea

Family Pandalidae

Dichelopandalus leptocerus (Smith, 1881). Bristled longbeak.

Pandalus leptocerus Smith 1881; *Pandalus falcipes* Spence Bate 1888.

Type locality: New England. Distribution: Shumagin Bank, Alaska; western Atlantic: Gulf of St. Lawrence and St. Mary's Bay, Newfoundland, to off Oregon Inlet, North Carolina; to a depth of 5464 m.

Pandalopsis aleutica Rathbun, 1902. Aleutian bigeye.
Type locality: Off Seguam Island, Aleutian Islands. Distribution: Bering Sea and Aleutian Islands; >400 m.

Pandalopsis ampla Bate, 1888. Stripe-legged pandalid or deepwater bigeye.

Pandalopsis amplus Bate 1888; *Pandalus amplus*: Wicksten and Hendrickx 2003.

Type locality: Montevideo, Uruguay. Distribution: Bering Sea to Acapulco; Gulf of California; southeastern Atlantic; 550–2000 m.

Pandalopsis dispar Rathbun, 1902. Sidestripe shrimp.
Type locality: Chernofski Harbor, Unalaska. Distribution: Pribilof Islands to Manhattan Beach, Oregon; 46–649 m; common.

Pandalopsis longirostris Rathbun, 1902. Northern longbeak.
Type locality: Iliuliuk Harbor, Unalaska. Distribution: Aleutian Islands; type material collected in 565 m.

Pandalus danae Stimpson, 1857. Coonstripe or dock shrimp.

Pandalus gurneyi Stimpson 1871; *Pandalus franciscorum* Kingsley 1878.

Type locality: Puget Sound, Washington. Distribution: North side of Alaskan Peninsula, Alaska, to San Quintin Bay, Baja California; intertidal zone to 185 m; common.

Pandalus eous Makarov, 1935. Alaskan pink shrimp.

Pandalus borealis: Brandt 1851; *Pandalus borealis* var. *eous* Makarov 1935; *Pandalus borealis eous*: Derjugin and Kobjakova 1941; *Pandalus eous*: Squires 1992.

Type locality: Bering Sea near Cape Navarin. Distribution: Northern North Pacific: Chukchi Sea south to Puget Sound, Washington, and the Sea of Japan; 16–1380 m; common.

Remarks: Makarov (1935) originally recognized this species as a Pacific variety of the Atlantic *P. borealis*. It is now considered to be a valid species based on several morphological characteristics (Squires, 1992; Komai, 1999).

Pandalus goniurus Stimpson, 1860. Flexed pandalid.

Pandalus dapifer Murdoch 1884.

Type locality: Avatska, Kamchatka. Distribution: Chukchi Sea; Bering Sea to Puget Sound; Okhotsk Sea; Sea of Japan near Vladivostok; 5–450 m; common.

Pandalus hypsinotus Brandt, 1851. Humpback shrimp.

non *Pandalus hypsinotus*: Doflein 1902 [= *Pandalus prensor* Stimpson 1860]; non *Pandalus hypsinotus*: Holthuis 1976 [= *Pandalus gracilis* Stimpson 1860]; non *Pandalus hypsinotus*: Miyake 1982 [= *Plesionika izumiae* Omori 1971].

Type locality: Unalaska, Aleutian Islands. Distribution: Northern North Pacific; Alaska; Chukchi Sea (new record); Norton Sound; Puget Sound; Bering Sea; Kamchatka; Kuril Islands; Sea of Okhotsk; Sea of Japan; continental coast southward to Korea; northern Japan; 5–501 m; common.

Pandalus jordani Rathbun, 1902. Smooth pink shrimp.
Type locality: Santa Cruz Island, California. Distribution: Iliuliuk Harbor, Unalaska Island, Aleutian Islands, to San Nicholas Island, California; 36–457 m; common.

Pandalus platyceros Brandt, 1851. Spot shrimp.

Pandalus pubescentulus Dana 1853; non *Pandalus platyceros*: Doflein (in part) [= *Pandalus latirostris*]; non *Pandalus* *platyceros*: Yokoya 1933 (in part) [= *Pandalus gracilis* Stimpson 1860].

Type locality: Unalaska, Aleutian Islands. Distribution: Aleutian Islands, to San Diego, California; intertidal zone to 487 m; common.

Pandalus stenolepis Rathbun, 1902. Rough patch shrimp.

Type locality: Straits of Juan de Fuca. Distribution: Unalaska Island, Aleutian Islands, to Heceta Bank, Oregon; 49–229 m.

Pandalus tridens Rathbun, 1902. Yellow-leg pandalid.

Pandalus annulicornis: Brandt 1851 (non *Pandalus annulicornis* Leach 1815); *Pandalus montagui*: Rathbun 1899 (non *Pandalus montagui* Leach 1814); *Pandalus montagui tridens* Rathbun 1902.

Type locality: North Head, Akutan Island, Aleutian Islands. Distribution: Northern North Pacific; Pribilof Islands, Bering Sea, to San Nicholas Island, California; Cape Oyutorsky; southern Kuril Islands; Pacific coast of Hokkaido, Japan; 5–1984 m; common.

Superfamily Pasiphaeoidea

Family Pasiphaeidae

Parapasiphae sulcatifrons Smith, 1884. Grooved-back shrimp.

Orphania tenuimana Bate 1888; *Dantecia caudani* Caullery 1896; *Pasiphaea metriomma* Dohrn 1908.

Type locality: East coast of United States. Distribution: Eastern Bering Sea to Baja California; Chile; Greenland and Iceland to Bermuda and the Gulf of Mexico; Ireland to the coast of Angola; 500–5340 m.

Pasiphaea pacifica Rathbun, 1902. Glass shrimp.

Type locality: Point Sur, California. Distribution: Unalaska to Gulf of California; Okhotsk Sea; Siberia; Australia; South Africa; intertidal zone to 1076 m; common.

Remarks: Data from AFSC RACE groundfish survey cruises (NMFS, AFSC, RACE survey database, 2012) shows this species occurring throughout the Aleutian Islands.

Pasiphaea tarda Krøyer, 1845. Crimson pasiphaeid.

Type locality: Greenland. Distribution: Unalaska to Ecuador; North Atlantic Ocean; intertidal zone to 2400 m; uncommon.

Infraorder Axiidea

Family Axiidae

Calocaris granulosa Grebjenjuk, 1975.

Calocaris (Calocaris) granulosus Grebjenjuk 1975.

Type locality: Yakutat Bay, Alaska. Distribution: Known only from Yakutat Bay; 756–1030 m.

Lophaxius investigatoris (Anderson, 1896).

Calastacus investigatoris Anderson 1896; *Axius (Eiconaxius) Investigatoris*: Alcock and Anderson 1896; *Calocaris (Calastacus) investigatoris*: Alcock 1901; *Calocaris (Calastacus) Investigatoris*: De Man 1925.

Type locality: Sind, Arabian Sea. Distribution: Aleutian Islands to off San Diego, California; 217–1733 m.

Family Callianassidae

Neotrypaea californiensis (Dana, 1854). Bay ghost shrimp.

Callianassa californiensis Dana 1854.

Type locality: California (probably San Francisco Bay or Monterey). Distribution: Mutiny Bay, Alaska to mouth of Tijuana River, San Diego County, California; high intertidal zone.

Family Ctenochelidae

Callianopsis goniophthalma (Rathbun, 1902). Slope ghost shrimp.

Callianassa goniophthalma Rathbun 1902.

Type locality: Point Conception, California. Distribution: Clarence Strait, Alaska, to Palos Verdes Peninsula, California; 483–1920 m.

Infraorder Gebiidea

Family Upogebiidae

Upogebia pugettensis (Dana, 1852). Blue mud shrimp.

Gebia pugettensis Dana 1852.

Type locality: Puget Sound, Washington. Distribution: Sawmill Bay, Alaska, to Morro Bay, California; intertidal to shallow subtidal zones.

Infraorder Anomura

Superfamily Chirostyloidea

Family Chirostylidae

Gastroptychus iaspis Baba and Haig, 1990. Seamount or thorny pinchbug.

Chirostylus sp.: Hart 1982, Wicksten 1982, Wicksten 1989.

Type locality: Jasper Seamount. Distribution: Southern Alaska to Jasper Seamount off Baja California, Mexico; 600–1189 m.

?***Gastroptychus perarmatus*** (Haig, 1968). Pacific red pinchbug.

Chirostylus perarmatus Haig 1968.

Type locality: North of Anacapa Island, California. Distribution: ?Alaska to Coronado Bank, California; 229–366 m.

Superfamily Galatheoidea

Family Munididae

Munida quadrispina Benedict, 1902. Pinch bug.
Type locality: Cape Beale, Vancouver Island. Distribution: Eastern Bering Sea to Los Coronados Islands, Mexico; 12–1463 m.

Family Munidopsidae

?***Munidopsis albatrossae*** Pequegnat and Pequegnat, 1973.
Munidopsis aries: Ambler 1980.
Type locality: South of Magdalena Bay, Baja California, Mexico (23°23.5′N, 112°30′W). Distribution: Eastern Pacific off Central America and Baja California; Antarctic Ocean (García Raso et al., 2008); Oregon and Washington (Ambler, 1980, as *Munidopsis aries*); Gulf of Alaska (Stevens, 2002); >2800 m.

Munidopsis antonii (Filhol, 1884).
Galathodes antonii Filhol 1884; *Munidopsis beringana* Benedict 1902.
Type locality: Bering Sea. Distribution: Bering Sea to Oregon; Northeast Atlantic; New Zealand; 2800–3990 m.

?***Munidopsis verrilli*** Benedict, 1902. Verrill's pinch bug.
Type locality: San Diego, California. Distribution: ?Bering Sea to Cedros Island, Baja California, Mexico; ?425–1986 m.
Remarks: Published records list the northern-most distribution of this species as Oregon, but two records in the AFSC RACE groundfish survey cruises (NMFS, AFSC, RACE survey database, 2012) list this species in the Bering Sea just north of the Aleutian Islands (at 425 and 854 m depth). These records have not been confirmed.

Family Porcellanidae

Pachycheles rudis Stimpson, 1859. Thickclaw porcelain crab.
Type locality: Monterey, California. Distribution: Kodiak, Alaska, to Magdalena Bay, Baja California, Mexico; intertidal zone to 29 m.

Petrolisthes eriomerus Stimpson, 1871. Flattop crab.
Type locality: Mendocino, California. Distribution: Chichagof Island, Alaska, to La Jolla, California; intertidal zone to 86 m.

Superfamily Hippoidea

Family Hippidae

Emerita analoga (Stimpson, 1857). Pacific sand crab.
Hippa analoga Stimpson 1857.
Type locality: California. Distribution: Karluk, Kodiak Island, Alaska, to Mexico; intertidal zone; uncommon.
Remarks: Records from Peru, Chile and Argentina probably belong to another species (Wicksten, 2011).

Superfamily Lithodoidea

Family Lithodidae

Cryptolithodes sitchensis Brandt, 1853. Umbrella crab.
Type locality: Sitka, Alaska. Distribution: Sitka, Alaska, to Point Loma, California; intertidal zone to 17 m; common.

Cryptolithodes typicus Brandt, 1848. Butterfly crab.
Type locality: Northern California. Distribution: Amchitka Island, Alaska, to Santa Rosa Island, California; intertidal zone to 45 m; common.

Lithodes aequispinus Benedict, 1895. Golden king crab.
Paralithodes longirostris Navosov-Lavroff 1929.
Type locality: Bering Sea. Distribution: Bering Sea to British Columbia; Sea of Okhotsk; Japan; 50–1000+ m; abundant, commercially fished.

Lithodes couesi Benedict, 1895. Scarlet king crab.
Type locality: North of Unalaska. Distribution: Bering Sea to San Diego, California; Japan; 258–1829 m; common.

Lopholithodes foraminatus (Stimpson, 1859). Brown box crab.
Echinocerus foraminatus Stimpson 1859.
Type locality: Near San Franciso, California. Distribution: Aleutian Islands; Kodiak, Alaska, to San Diego, California; intertidal zone to 547 m; common.

Lopholithodes mandtii Brandt, 1848. Puget Sound king crab.
Type locality: Sitka, Alaska. Distribution: Sitka, Alaska, to Monterey, California; intertidal zone to 200 m; common.

Paralithodes brevipes (H. Milne Edwards and Lucas, 1841). Kuril king crab, spiny king crab, or hanasaki crab.
Lithodes brevipes Milne Edwards and Lucas 1841.
Type locality: Kamchatka. Distribution: Bering Sea; Sea of Japan, Sea of Okhotsk, Kamchatka; intertidal zone to 50 m; uncommon.
Remarks: This species was recently discovered in the eastern Bering Sea (Haecker, 2011).

Paralithodes californiensis (Benedict, 1895). California king crab.
Lithodes californiensis Benedict 1895.

Type locality: Santa Cruz Island, California. Distribution: Gulf of Alaska to San Diego, California; 70–917 m.

Paralithodes camtschaticus (Tilesius, 1815). Red king crab.

Maja camtschatica Tilesius 1815; *Lithodes spinosissimus* Brandt 1849; *Lithodes camtschatica*: De Haan 1850; *Paralithodes rostrofalcatus* MacKay 1933.

Type locality: Kamchatka. Distribution: Chukchi Sea; Bering Sea south to the Queen Charlotte Islands in the eastern Pacific and to Japan in the western Pacific; recently introduced to the Atlantic coast of Russia and Norway; 3–366 m; abundant, commercially fished.

Paralithodes platypus Brandt, 1850. Blue king crab.

Type locality: Ajan, Russia. Distribution: Western Pacific widespread boreal, including Point Barrow, Alaska, to Bristol Bay; 10–500 m; abundant, commercially fished.

Paralomis makarovi Hall and Thatje, 2009.

Type locality: Bowers Bank, Bering Sea (near western Aleutian Islands). Distribution: Known only from type locality; 629 m; rare.

?***Paralomis manningi*** Williams, Smith and Baco, 2000.

Type locality: San Clemente Basin, southern California. Distribution: ?Gulf of Alaska to southern California; type material collected at 1922 m.

Remarks: According to records from NOAA's AFSC RACE groundfish survey cruises (NMFS, AFSC, RACE survey database, 2012) this species occurs in the Gulf of Alaska, but those records are not confirmed.

Paralomis multispina (Benedict, 1895). Many spine spider crab.

Leptolithodes multispinus Benedict 1895.

Type locality: Queen Charlotte Islands, British Columbia. Distribution: Alaska to Guadalupe Island, Baja California, Mexico; Japan; 1100–1577 m.

Paralomis verrilli (Benedict, 1895). Verrill's spider crab.

Pristopus verrilli Benedict 1895.

Type locality: Pribilof Islands. Distribution: Bering Sea south to San Benito Island, Baja California and Sea of Okhotsk; 1238–2379 m.

Phyllolithodes papillosus Brandt, 1848. Flatspine triangle crab.

Type locality: Kodiak Island, Alaska. Distribution: Dutch Harbor, Alaska, to San Miguel Island, California; intertidal zone to 183 m.

Rhinolithodes wosnessenskii Brandt, 1848. Rhinocerus crab.

Type locality: Sitka and Kodiak, Alaska. Distribution: Aleutian Islands; Kodiak, Alaska, to Crescent City, California; 6–73 m.

Family Hapalogastridae

Acantholithodes hispidus (Stimpson, 1860). Fuzzy crab.

Dermaturus hispidus Stimpson 1860.

Type locality: Monterey Bay, California. Distribution: Pumicestone Bay, Alaska, to San Nicolas Island, California; intertidal zone to 164 m; common.

Dermaturus mandtii Brandt, 1850. Wrinkled crab.

Type locality: Alaska. Distribution: Pribilof Islands to Sitka, Alaska; Japan; intertidal zone to 72 m; common.

Hapalogaster grebnitzkii Schalfeew, 1892. Soft crab.

Type locality: Not traced. Distribution: Bering Sea to British Columbia; Sea of Okhotsk; northern part of the Sea of Japan; Russian shores to Sibiryakov Island; intertidal zone to 100 m; common.

Remarks: Records of this species in California are likely in error (Wicksten, 2011).

Hapalogaster mertensii Brandt, 1850. Hairy crab.

Type locality: Sitka, Alaska. Distribution: Aleutian Islands to Puget Sound, Washington; intertidal zone to 35 m; common.

Oedignathus inermis (Stimpson, 1860). Granular claw crab.

Hapalogaster inermis Stimpson 1860.

Type locality: Puget Sound, Washington. Distribution: Dutch Harbor, Alaska, to Pacific Grove, California; Korea; Japan; intertidal zone to 15 m.

Placetron wosnessenskii Schalfeew, 1892. Scaled crab.

Lepiopus forcipulatus Benedict 1894.

Type locality: Not traced. Distribution: Pribilof Islands to Puget Sound, Washington; shallow subtidal zone to 110 m.

Superfamily Paguroidea

Family Diogenidae

Paguristes turgidus (Stimpson, 1857).

Clibanarius turgidus Stimpson 1857; *Eupagurus turgidus*: Stimpson 1859; *Pagurus turgidus*: Williamson 1915; *Paguristes turgides*: Gordan 1956.

Type locality: Puget Sound, Washington. Distribution: Chukchi Sea to San Diego, California; 5–465 m.

Family Paguridae

Discorsopagurus schmitti (Stevens, 1925).

Pylopagurus schmitti Stevens 1925; *Orthopagurus schmitti*: Stevens 1927.

Type locality: Point Caution, Washington. Distribution:

Sitka Sound, Alaska, to Albion, Mendocino County, California; Japan; intertidal zone to 220 m.

Remarks: This species inhabits tubes of the polychaete families Sabellidae and Serpulidae.

Elassochirus cavimanus (Miers, 1879). Purple hermit.

Eupagurus cavimanus Miers 1879; *Eupagurus (Elassochirus) munitus* Benedict 1892; *Pagurus (Elassocheirus) munitus*: Holmes 1900; *Pagurus munitus*: Rathbun 1904; *Eupagurus munitus*: Alcock 1905; ?*Eupagurus gotoi* Terao 1913; *Pagurus cavimanus*: Makarov 1938; *Pagurus cavimanus munitus*: Makarov 1938; *Pagurus gilli cavimanus*: Makarov 1938; ?*Pagurus gotoi*: Gordan 1956; non *Eupagurus cavimanus*: Balss 1913 [= *Elassochirus gilli* (Benedict 1892)]; non *Eupagurus munitus*: Balss 1913 [= *Elassochirus gilli* (Benedict 1892)]; non *Pagurus cavimanus*: Makarov 1938 [= *Elassochirus gilli* (Benedict 1892)].

Type locality: Tsugaru Strait. Distribution: Bering Sea and Aleutian Islands to Washington; Sea of Japan, Okhotsk Sea, Kuril Islands; 25–260 m; common.

Elassochirus gilli (Benedict, 1892). Pacific red hermit.

Eupagurus (Elassochirus) gilli Benedict 1892; *Pagurus (Elassocheirus) Gilli*: Holmes 1900; *Pagurus gilli*: Rathbun 1904; *Eupagurus gilli*: Alcock 1905; *Eupagurus cavimanus*: Balss 1913 [non *Eupagurus cavimanus* Miers 1879]; *Eupagurus munitus*: Balss 1913 [non *Eupagurus munitus* Benedict 1892]; *Eupagurus porcellanus* Molander 1914; *Pagurus cavimanus*: Makarov 1948; *Pagurus minutus*: Makarov 1938; *Pagurus porcellanus*: Gordan 1956.

Type locality: Nazan Bay, Atka Island, Aleutian Islands. Distribution: Bering Sea south to Puget Sound in the eastern Pacific and to the Sea of Japan in the western Pacific; intertidal zone to 200 m; common.

Elassochirus tenuimanus (Dana, 1851). Widehand hermit.

Bernhardus tenuimanus Dana 1851; *Eupagurus tenuimanus*: Stimpson 1857; *Eupagurus (Elassochirus) tenuimanus*: Benedict 1892; *Pagurus (Elassocheirus) tenuimanus*: Holmes 1900; *Pagurus tenuimanus*: Rathbun 1904.

Type locality: Puget Sound, Washington. Distribution: Aleutian Islands to Puget Sound; intertidal zone to 388 m; common.

Labidochirus splendescens (Owen, 1839). Splendid hermit.

Pagurus splendescens Owen 1839; *Pagurus (Eupagurus) splendescens*: Brandt 1851; *Eupagurus splendescens*: Stimpson 1858; *Eupagurus (Labidocheirus) splendescens*: Benedict 1892; *Pagurus (Labidocheirus) splendescens*: Holmes 1900.

Type locality: Kamchatka, Russia. Distribution: Arctic Ocean south to Puget Sound, Washington; Sea of Japan; Okhotsk Sea; Kuril Islands; Kamchatka; 3–412 m; common.

Pagurus aleuticus (Benedict, 1892). Aleutian hermit.

Eupagurus (Eupagurus) aleuticus Benedict 1892; *Pagurus aleuticus*: Rathbun 1899; *Pagurus (Eupagarus) aleuticus*: Holmes 1900; *Eupagarus aleuticus*: Alcock 1905; *Pagurus ochotensis aleuticus*: Makarov 1938.

Type locality: Aleutian Islands. Distribution: Bering Sea to Eureka, California; 15–435 m; common.

Pagurus armatus (Dana, 1851). Armed or blackeyed hermit.

Bernhardus armatus Dana 1851; *Eupagurus armatus*: Stimpson 1857; *Eupagurus ochotensis*: Stimpson 1858 [in part, non *Eupagurus ochotensis* (Brandt 1851)]; *Eupagurus alaskensis*: Harrington and Griffin 1897 (non *Eupagurus alaskensis* Benedict 1892); *Pagurus (Eupagurus) ochotensis*: Holmes 1900 (non *Pagurus ochotensis* Brandt 1851); *Pagurus ochotensis*: Benedict 1901 (non *Pagurus ochotensis* Brandt 1851).

Type locality: Puget Sound, Washington. Distribution: Dutch Harbor, Alaska, to San Diego, California; intertidal zone to 146 m.

Pagurus beringanus (Benedict, 1892). Bering hermit.

Eupagurus beringanus Benedict 1892; *Eupagurus newcombei* Benedict 1892; *Pagurus Newcombei*: Holmes 1900; *Pagurus beringanus*: Rathbun 1904; *Eupagurus beringanus*: Alcock 1905; *Eupagurus newcombei*Alcock 1905; *Pagurus newcombei*: Taylor 1912.

Type locality: Bristol Bay, Alaska. Distribution: Bering Sea and Aleutian Islands to Monterey, California; intertidal zone to 364 m.

Pagurus brandti (Benedict, 1892). Sponge hermit.

Eupagurus brandti Benedict 1892; *Pagurus brandti*: Holmes 1900 (in part); *Pagurus brandti*: Rathbun 1904 (in part); *Eupagurus brandti*: Alcock 1905 (in part); *Pagurus pubescens*: Makarov 1937 (in part); *Pagurus trigonocheirus*: McLaughlin 1963 [non *Pagurus trigonocheirus* (Stimpson 1858)]; non *Pagurus brandti*: Rathbun 1899, McLaughlin 1963, Hart 1971; non *Pagurus brandti*: Stevens 1925, Hart 1940, Bakus 1966 [= *Pagurus stevensae*]; non *Eupagurus brandti*: Sivertsen 1932 [= *Pagurus trigonocheirus*].

Type locality: North of Unimak Island, Aleutian Islands. Distribution: Chukchi Sea to southern Bering Sea; 60–80 m; common; often associated with hermit sponges (*Suberites* spp.).

Pagurus capillatus (Benedict, 1892).

Eupagurus capillatus Benedict 1892; *Eupagurus trigonochirus*: Balss 1913 (non *Eupagurus trigonocheirus* Stimpson 1858); *Pagurus setosus*: Stevens 1925, Makarov 1938 (in part), Hart 1940 (in part), Makarov 1962 (in part) [non *Pagurus setosus* (Benedict 1892)]; *Pagurus* sp. [2]: McLaughlin 1963.

Type locality: Norton Sound, Alaska. Distribution: Chukchi Sea and Bering Sea to Santa Cruz, California; Kamchatka, Okhotsk Sea, Sea of Japan, North Korea; 4–439 m; common.

Pagurus caurinus Hart, 1971. Greenmark hermit.

Pagurus setosus: Hart 1940 (in part).

Type locality: Frank Island, Tofino, British Columbia. Distribution: Port Gravina, Alaska, to San Pedro, California; intertidal zone to 126 m.

Pagurus confragosus (Benedict, 1892). Knobbyhand hermit.

Eupagurus confragosus Benedict 1892.

Type locality: Portlock Bank, Alaska. Distribution: Bristol Bay, Alaska, to Columbia River mouth, Oregon; 55–435 m; common.

Pagurus cornutus (Benedict, 1892). Hornyhand hermit.

Eupagurus cornutus Benedict 1892.

Type locality: Clarence Strait, Alaska. Distribution: Western North Pacific and Bering Sea to west of Columbia River mouth, Oregon; 160–830 m; common.

Pagurus dalli (Benedict, 1892). Whiteknee hermit.

Eupagurus dalli Benedict 1892.

Type locality: Bristol Bay, Alaska. Distribution: Bering Sea to Oregon; intertidal zone to 276 m.

Pagurus granosimanus (Stimpson, 1859). Grainyhand hermit.

Eupagurus granosimanus Stimpson 1859.

Type locality: Monterey, California. Distribution: Unalaska, Alaska, to Ensenada, Baja California, Mexico; intertidal zone to 36 m.

Pagurus hemphilli (Benedict, 1892). Maroon hermit.

Eupagurus hemphilli Benedict 1892.

Type locality: Monterey, California. Distribution: Klokachef Island, Alaska, to San Miguel Island, California; intertidal zone to 50 m.

Pagurus hirsutiusculus (Dana, 1851). Hairy hermit.

Bernhardus hirsutiusculus Dana 1851; *Eupagurus hirsutiusculus*: Stimpson 1857; *Pagurus (Trigonocheirus) hirsutiusculus*: Holmes 1900; *Eupagurus mertensi*: Lenz 1901; *Pagurus samuelis*: Rathbun 1904 (in part); *Pagurus hirsutiusculus hirsutiusculus*: Coffin 1957, McLaughlin 1974.

Type locality: Puget Sound, Washington. Distribution: Pribilof Islands to Monterey, California; Siberia; Okhotsk Sea; Japan; Kuril Islands; intertidal zone to 110 m.

Pagurus kennerlyi (Stimpson, 1854). Bluespine hermit.

Eupagurus Kennerlyi Stimpson 1854; *Eupagurus (Trigonochirus) confragosus* Benedict 1892 (in part).

Type locality: Puget Sound, Washington. Distribution: Pribilof and Aleutian Islands to Puget Sound, Washington; Muroran, Yezo, Japan; intertidal zone to 274 m; common.

Pagurus mertensii Brandt, 1851.

Eupagurus mertensi: Doflein 1900; *Parapagurus mertensii*: Alcock 1905; *Pagurus hirsutiusculus*: Makarov 1938; non *Eupagurus (Labidochirus) mertensii*: Benedict 1892; non *Eupagurus mertensi*: Lenz 1901 [= *Pagurus hirsutiusculus hirsutiusculus* (Dana 1851)]; non *Eupagurus mertensii*: Stimpson 1907 [= *Pagurus hirsutiusculus hirsutiusculus* (Dana 1851)].

Type locality: Kamchatka. Distribution: Alaska (St. Paul Island, Pribilof Islands); Kamchatka; depth range unknown.

Pagurus ochotensis Brandt, 1851. Okhotsk hermit.

Eupagurus bernhardus: Stimpson 1857, Molander 1914 (non *Cancer bernhardus* Linnaeus 1758); *Eupagurus ochotensis*: Stimpson 1858 (in part), Alcock (in part), Stimpson 1907; *Pagurus bernhardus* L. var. *granulato-denticulata*: Richters 1884; *Eupagurus (Eupagurus) alaskensis* Benedict 1892; *Eupagurus alaskensis*: Harrington 1898, Alcock 1905, Appellöf 1906; *Pagurus alaskensis*: Rathbun 1899, Benedict 1901, Rathbun 1904, 1910, Taylor 1912, Williamson 1915, Stevens 1925, Fraser 1932, Wismer and Swanson 1935, Hart 1940, Reinhard 1944, Gordan 1956, Reischman 1959, McLaughlin 1963, George and Strömberg 1968; *Pagurus (Eupagurus) alaskensis*: Holmes 1900; *Eupagurus ortmanni* Balss 1911; *Eupagurus spinimanus*: Terao 1913 (non *Pagurus spinimanus* Milne-Edwards 1848); *Pagurus ochotensis ochotensis*: Vinogradov 1950; non *Eupagurus ochotensis*: Calman 1898, Bonnier 1900 [= *Pagurus armatus* (Dana 1851)]; non *Pagurus (Eupagurus) ochotensis*: Holmes 1900 [= *Pagurus armatus* (Dana 1851)]; non *Pagurus ochotensis*: Benedict 1901, Rathbun 1904, 1910, Taylor 1912, Schmitt 1921, Stevens 1925, Fraser 1932, Wismer and Swanson 1935, MacGinitie 1937, Wiersma and Harreveld 1939, Hart 1940, Hatch 1947, MacGinitie and MacGinitie 1949, George and Strömberg 1968, Roberts 1968 [= *Pagurus armatus* (Dana 1851)].

Type locality: Okhotsk Sea. Distribution: Pribilof Islands, Alaska, to Point Arena, California; Siberia; Kamchatka; Okhotsk Sea; Kuril Islands; Sea of Japan; intertidal zone to 388 m; common.

Pagurus quaylei Hart 1971.

Type locality: Frederick Island, British Columbia. Distribution: San Fernando Island, Alaska, to San Quentin Bay, Baja California, Mexico; intertidal zone to 97 m.

Pagurus rathbuni (Benedict, 1892). Longfinger hermit.

Eupagurus (Trigonochirus) rathbuni Benedict 1892; *Eupagurus rathbuni*: Alcock 1905; *Eupagurus (Trigonocheirus) polaris* Sivertsen 1932; *Pagurus (Trigonocheirus) polaris*: Gordan 1956.

Type locality: Bering Sea, Alaska. Distribution: Chukchi Sea to Gulf of Alaska; East Siberian Sea; Kamchatka; Okhotsk Sea; Kuril Islands; Sea of Japan; 9–210 m; common.

?***Pagurus samuelis*** (Stimpson, 1857). Bluehand hermit.

Eupagurus samuelis Stimpson 1857.

Type locality: Tomales Bay, California. Distribution: Western Gulf of Alaska to Nootka Sound, British Columbia; high intertidal zone.

Remarks: Wicksten (2012) recorded the range from Nootka Sound, British Columbia, but there is a record in Katmai National Park, Alaska (Suchanek[16]). This species usually inhabits shells of *Tegula* spp.

Pagurus setosus (Benedict, 1892). Setose hermit.

Eupagurus (Trigonochirus) setosus Benedict 1892; *Eupagurus setosus*: Alcock 1905; non *Pagurus setosus*: Milne-Edwards 1848, Stimpson 1858 [= *Paguristes setosus* (Milne-Edwards 1848)]; non *Pagurus setosus*: Stevens 1925 [= *Pagurus capillatus* (Benedict 1892)].

Type locality: Sitka, Alaska. Distribution: Kodiak, Alaska, to Santa Cruz, California; 9–476 m.

Pagurus stevensae Hart, 1971. Steven's hermit.

Pagurus brandti: Stevens 1925, Hart 1940, Gordan 1956 (in part), Bakus 1966 [non *Pagurus brandti* (Benedict 1892)].

Type locality: Malcolm Island, British Columbia. Distribution: Bering Sea to Puget Sound, Washington; 26–198 m.

Pagurus tanneri (Benedict, 1892). Longhand hermit.

Eupagurus (Trigonochirus) tanneri Benedict 1892; *Eupagurus tanneri*: Alcock 1905.

Type locality: Clarence Strait, Alaska. Distribution: Bering Sea and Unalaska to Point Loma, San Diego County, California; 91–1372 m.

Pagurus townsendi (Benedict, 1892).

Eupagurus (Trigonochirus) townsendi Benedict 1892; *Eupagurus townsendi*: Alcock 1905.

Type locality: Bering Sea, Alaska. Distribution: Pribilof Islands to Unalaska and Shumagin Bank, Alaska; 519–1143 m; common.

Pagurus trigonocheirus (Stimpson, 1858). Fuzzy hermit.

Eupagurus trigonocheirus Stimpson 1858; *Pagurus pubescens*: Richters 1884; *Eupagurus (Trigonochirus) brandti* Benedict 1892 (in part); *Pagurus brandti*: Rathbun 1899; *Eupagurus pubescens*: Doflein 1900; non *Pagurus trigonocheirus*: McLaughlin 1963 [= *Pagurus brandti* (Benedict 1892)].

Type locality: Bering Strait. Distribution: Arctic Ocean, Chukchi Sea, Bering Strait to the Aleutian Islands; Kamchatka; Kuril Islands; Sea of Japan; Korea; subtidal zone to 182 m; common.

Pagurus undosus (Benedict, 1892). Pribilof hermit.

Eupagurus (Trigonochirus) undosus Benedict 1892; *Eupagurus trigonochirus* var. *paulensis* Balss 1913.

Type locality: St. Paul Island, Pribilof Islands, Bering Sea. Distribution: Chukchi Sea south to the Aleutian Islands; Okhotsk Sea; Sea of Japan; Kuril Islands; 18–64 m.

Family Parapaguridae

Parapagurus benedicti de Saint Laurent, 1972.

Parapagurus sp. Indet.: Rathbun 1904, 1910; *Parapagurus armatus*: Reinhard 1944; *Parapagurus pilosimanus:* Haig 1955, Pereyra and Alton 1972; *Parapagurus pilosimanus benedicti* de Saint Laurent 1972; *Parapagurus benedicti*: Lemaitre 1989, Hendrickx and Harvey 1999.

Type locality: Point Sur Light, California. Distribution: Alaska to Chile; 750–1902 m.

Remarks: As indicated by de Saint Laurent (1972), Benedict considered the Pacific form of *Parapagurus pilosimanus* to be distinct from Smith's (1879) Atlantic species.

Infraorder Brachyura

Superfamily Grapsoidea

Family Varunidae

Hemigrapsus nudus (Dana, 1851). Purple shore crab.

Pseudograpsus nudus Dana 1851.

Type locality: Puget Sound, Washington. Distribution: Yakobi Island, Alaska, to Turtle Bay, Baja California, Mexico; upper to mid-tidal zone.

Hemigrapsus oregonensis (Dana, 1851). Yellow shore crab.

Pseudograpsus oregonensis Dana 1851.

Type locality: Puget Sound, Washington. Distribution: Resurrection Bay, Alaska, to Turtle Bay, Baja California, Mexico; intertidal zone.

Superfamily Majoidea

Family Epialtidae

Chorilia longipes Dana, 1852. Longhorn decorator crab.

Chorilia longipes turgida Rathbun 1924.

Type locality: Oregon territory. Distribution: Shumagin Bank, Alaska, to Cortez Bank, California; northern Peru; 33–1200 m.

Mimulus foliatus Stimpson, 1860. Foliate kelp crab.

Type locality: Monterey, California. Distribution: Unalaska, Alaska, to San Diego, California; intertidal zone to 129 m.

Pugettia gracilis Dana, 1851. Graceful kelp crab.

Type locality: Puget Sound, Washington. Distribution: Aleutian Islands to Monterey Bay, California; intertidal zone to 367 m.

Pugettia producta (Randall, 1840). Northern kelp crab.

Epialtus productus Randall 1840.

Type locality: Upper California. Distribution: Prince of Wales Island, Alaska, to Point Asunción, Baja California, Mexico; intertidal zone to 74 m.

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[16] Suchanek, T. H. 1994. Intertidal communities of Katmai National Park, Alaska: Assessment of natural resources and disturbance events. Draft Final Report No. 3. Division of Environmental Studies, Univ. of California, Davis, CA 95616.

Pugettia richii Dana, 1851. Cryptic kelp crab.
Type locality: California. Distribution: Prince of Wales Island, Alaska, to San Geronimo Island and Asuncion Bay, Baja California, Mexico; intertidal zone to 98 m.

Scyra acutifrons Dana, 1852. Sharpnose crab.
Type locality: Oregon. Distribution: Kachemak Bay, Cook Inlet, Alaska, to Point San Carlos, Baja California, Mexico; intertidal zone to 114 m.

Family Oregoniidae

Chionoecetes angulatus Rathbun, 1924. Triangle Tanner crab.
Type locality: South of Pribilof Islands. Distribution: Bering Sea off Pribilof Islands to northwest of Cape Blanco, Oregon; 90–3000 m; abundant.

Chionoecetes bairdi Rathbun, 1924. Southern Tanner crab.
Chionoecetes opilio Rathbun 1893 (in part).
Type locality: Head of Kingcombe Inlet, British Columbia. Distribution: From the southeastern part of the Bering Sea and the Aleutian Islands to Oregon; 6–474 m; commercially harvested.

Chionoecetes opilio (O. Fabricius, 1788). Snow crab.
Cancer opilio O. Fabricius 1788; *Peloplastus pallasii* Gerstäcker 1856; *Chionoecetes behringianus* Stimpson 1857; *Chionoecetes chilensis* Streets 1870; *Chionoecetes opilio elongatus* Rathbun 1924.
Type locality: Greenland. Distribution: Arctic Alaska south to the Aleutian Islands and to Korea; West Greenland to Casco Bay, Maine; 5–800 m; commercially harvested.
Remarks: This species has recently been recorded in the Barents Sea (Alvsvåg et al., 2009).

Chionoecetes tanneri Rathbun, 1893. Grooved Tanner crab.
Type locality: Gulf of the Farallones, California. Distribution: Bering Sea to off Coronado Islands, Baja California, Mexico; 54–1960 m; commercially harvested.

Hyas coarctatus Leach, 1816. Arctic lyre crab.
Hyas coarctatus coarctatus Leach 1815; *Lissa fissirostra* Say 1817; *Hyas serratus* Hailstone 1835; *Hyas bufonius* White 1847; *Hyas latifrons* Stimpson 1857; *Hyas coarctatus* var. *latifrons* Braznikov 1907.
Type locality: Plymouth Sound, Firth of Forth, Scotland. Distribution: Point Barrow, Alaska, to Bering Strait and south to southeast Bering Sea and Kamchatka and Sakhalin Island to Yezo Strait and through the Sea of Japan to Korea; Iceland; Arctic coast of Europe to Spitsbergen; coast of Siberia and northward, as far west as Bennett Island; intertidal zone to 682 m; common.
Remarks: The subspecies *Hyas coarctatus alutaceus* and *H. c. ursinus* are currently recognized as species (Ng et al., 2008).

Hyas lyratus Dana, 1815. Pacific lyre crab.
Type locality: Oregon. Distribution: Bering Sea to Puget Sound, Washington; 9–640 m; abundant.

Macroregonia macrochira Sakai, 1978. Long clawed spider crab.
Type locality: North of Nintoku Seamount (42°20′N, 170°50′E). Distribution: This species is listed in a checklist of Alaskan crabs (Stevens, 2002) as being found on Patton Seamount in the Gulf of Alaska below 1000 m (Hoff and Stevens, 2005); Tunnicliffe and Jensen (1987) listed the Explorer Ridge off British Columbia as the northern-most locality in the eastern North Pacific; >800 m; uncommon.

Oregonia bifurca Rathbun, 1902. Split-nose decorator crab.
Type locality: North of Rat Islands, Aleutian Islands. Distribution: Aleutian Islands; < 500 m; common.

Oregonia gracilis Dana, 1851. Graceful decorator crab.
Type locality: Puget Sound, Washington. Distribution: Bristol Bay, Bering Sea, to Monterey Bay, California; Japan; intertidal zone to 390 m; abundant.

Superfamily Cancroidea

Family Cancridae

Cancer productus Randall, 1840. Red rock crab.
Type locality: Western America. Distribution: Kodiak Island, Alaska, to San Diego, California; intertidal zone to 79 m; common.

Glebocarcinus oregonensis (Dana, 1852). Pygmy or Oregon rock crab.
Trichocera oregonensis Dana 1852; *Cancer oregonensis*: Rathbun 1904.
Type locality: Puget Sound, Washington. Distribution: St. George Island, Pribilof Islands to Palos Verdes Peninsula, California; intertidal zone to 435 m; common.

Metacarcinus gracilis (Dana, 1852). Graceful rock crab.
Cancer gracilis Dana 1852.
Type locality: San Francisco, California. Distribution: Prince William Sound to Playa Maria Bay, Baja California, Mexico; intertidal zone to 174 m; common.

Metacarcinus magister (Dana, 1852). Dungeness crab.
Cancer magister Dana 1852.

Type locality: San Francisco Bay, California. Distribution: Pribilof Islands and the Aleutian Islands to Pismo Beach, California; intertidal zone to 230 m; common; commercially harvested.

Romaleon branneri (Rathbun, 1926). Furrowed rock crab.

Cancer branneri Rathbun 1926; *Cancer gibbosulus*: Schmitt 1921 [non *Cancer gibbosulus* (De Hann 1835)].

Type locality: San Franciso, California. Distribution: Port Althorp, Alaska, to Cedros Island, Baja California, Mexico; intertidal zone to 80 m; common.

Superfamily Cheiragonoidea

Family Cheiragonidae

Erimacrus isenbeckii (Brandt, 1848). Hair crab.

Platycorystes (Podocanthus) isenbeckii Brandt 1848; *Cheiragonus isenbeckii*: Brandt 1851.

Type locality: Unalaska, Aleutian Islands. Distribution: Bering Sea; Aleutian Islands; Kuril Islands; Japan; Korea; 2–350 m; common.

Telmessus cheiragonus (Tilesius, 1812). Helmet crab.

Cancer cheiragonus Tilesius 1812; *Telmessus serratus* White 1846; *Platycorystes ambiguus* Brandt 1848; *Cheiragonus hippocarcinoides* Brandt 1851.

Type locality: Awatscha Bay, Kamchatka. Distribution: Chukchi Sea to Puget Sound, Washington; Siberia to Japan; intertidal zone to 110 m; common.

Superfamily Pinnotheroidea

Family Pinnotheridae

Fabia subquadrata Dana, 1851. Grooved mussel crab.

Type locality: Puget Sound, Washington. Distribution: Akutan Pass, Aleutian Islands, to Todos Santos Bay, Baja California, Mexico; intertidal zone to 220 m.

Pinnixa faba (Dana, 1851). Mantle pea crab.

Pinnotheres faba Dana 1851.

Type locality: Puget Sound, Washington. Distribution: Prince of Wales Island, Alaska, to Camalu Point, Baja California, Mexico; intertidal zone.

Remarks: This species is usually symbiotic in the mantle cavity of bivalves, holothurians, and ascidians.

Pinnixa littoralis Holmes, 1894. Gaper pea crab.

Type locality: Bodega Bay, California. Distribution: Sitka, Alaska, to Santa Maria, Baja California, Mexico; intertidal zone to 91 m.

Remarks: This species is usually symbiotic in the mantle cavity of bivalves, rarely with tube anemones (order Ceriantharia).

Pinnixa occidentalis Rathbun, 1894.

Type locality: South of Unimak Island, Alaska. Distribution: Unalaska to Magdalena Bay, Baja California, Mexico; subtidal zone to 439 m.

Remarks: This species is commensal with echiuroid worms.

Pinnixa schmitti Rathbun, 1918. Schmitt's pea crab.

Type locality: San Franciso Bay, California. Distribution: Captain's Bay, Unalaska, Alaska, to San Diego, California; intertidal zone to 146 m.

Remarks: This species is commensal with echiuroids, holothurians, polychaetes, callianassids, and rarely ophiuroids.

?***Pinnixa tubicola*** Holmes, 1894.

Type locality: Not specified: Type material from Trinidad (Humboldt County), Cape Mendocino, and Bodega Bay, California. Distribution: Prince Rupert, British Columbia, to Blanca Bay, Baja California, Mexico; unverified reports from Alaska; intertidal zone to 57 m.

Remarks: Commensal with polychaetes, often living in male-female pairs.

Superfamily Xanthoidea

Family Panopeidae

Lophopanopeus bellus (Stimpson, 1860). Blackclaw crestleg crab.

Xantho bella Stimpson 1860; *Lophopanopeus diegensis* Rathbun 1900; *Lophopanopeus bellus bellus* Menzies 1948; *Lophopanopeus bellus diegensis* Menzies 1948.

Type locality: Monterey, California. Distribution: Resurrection Bay, Alaska, to Cape Tortolo, Baja California, Mexico; intertidal zone to 73 m.

Lophopanopeus diegensis Rathbun, 1900.

Type locality: San Diego, California. Distribution: Prince William Sound, Alaska, to Playas de Rossarito, Baja California, Mexico; 9–135 m.

Phylum Brachiopoda—The Lamp Shells

The brachiopods (lamp shells) are a small group of marine lophophorates that superficially resemble bivalves. Unlike bivalves, most brachiopods are attached to a substratum by a fleshy pedicle. They reached their peak of abundance and diversity in the Paleozoic. Brachiopod fossils have been useful indicators of climate change. About 330 extant species are known worldwide (Ax, 2003), with approximately eight species occurring in Alaskan waters (Table 1). A key to identify Arctic species can be found in Buzhinskaja (2011). The major publications used to compile the information for the list of brachiopods came from Davidson (1886–1888).

Class Articulata

Order Rhynchonellida

Family Frieleiidae

Frieleia halli Dall, 1895. Hall's lamp shell.

Hemithrysis psittacea: Keep 1904, Keep and Baily 1935 (in part).

Type locality: Cortez Bank, California. Distribution: Eastern North Pacific: Aleutian Islands and Gulf of Alaska to San Diego, California; western North Pacific: Japan and Kamchatka; 40–2200 m.

Family Hemithyrididae

Hemithyris psittacea (Gmelin, 1790).

Anomia psittacea Gmelin 1790; *Rhynchonella psittacea*: Dall 1870.

Type locality: White Sea. Distribution: Circum-boreal; south to Oregon in the eastern North Pacific; North Sea; western North Ireland; Spitsbergen; Greenland; east coasts of Canada; 6–1100 m.

Order Terebratulida

Family Cancellothyrididae

Terebratulina kiiensis Dall and Pilsbry, 1891.

Terebratulina crossei Davidson 1882; *Terebratulina magalhaenica* Helmcke 1939.

Type locality: Coast of the Province of Kii, Japan. Distribution: Alaska to South America; Japan; 20–825 m.

Terebratulina unguicula (Carpenter, 1864).

Terebratula unguiculus Carpenter 1864; *Terebratulina caput-serpentis* var. *unguiculata*: Davidson 1886; *Terebratulina caput-serpentis* [non Linnaeus]: Cooper 1894, Dall 1895, Kelsey 1907, Willett 1918, Keep and Baily 1935.

Type locality: Monterey, California. Distribution: Pribilof Islands, Alaska to Cabo San Lucas, Baja California Sur, Mexico; Kamchatka Peninsula; 10–850 m.

Family Dallinidae

Glaciarcula spitsbergensis (Davidson, 1852).

Terebratella Spitsbergensis Davidson 1852; *Terebratalia Spitsbergensis*: Dall 1920; *Diestothyris Spitsbergensis*: Thomson 1927.

Type locality: Spitsbergen, Norway. Distribution: Widespread boreal Arctic, circumpolar; 32–2450 m.

Family Laqueidae

Laqueus californianus (Koch, 1848). California lamp shell.

Terebratula californiana Koch 1848; *Terebratula californica*: Sowerby 1847; *Waldheimia californica*: Gray 1853, Carpenter 1856; *Laqueus californica*: Hatai 1936; *Laqueus californicus*: Dall 1870 (in part), Davidson 1887, Beecher 1893, Lowe 1904, Berry 1907, Arnold and Anderson 1907, Kelsey 1907, Oldroyd 1924, Thompson 1927, Johnson and Snook 1927, Keep and Baily 1935 [sic *Laqueas*], Nomura and Hatai 1937, Burch 1942, Smith and Gordon 1948, MacGinitie and MacGinitie 1968; *Terebratula kochii* Küster in Martini-Chemnitz 1848; *Laqueus erythraeus* Dall 1920; *Megerlia Jeffreysi* Dall 1877; *Frenula Jeffreysi*: Dall 1871 (in part) [non Dall]; *Ismenia Jeffreysi*: Dall 1871 (in part) [non Dall]; *Laqueus jeffreysi* (Dall). Dall 1894, Lowe 1904, Arnold 1907, Du Bois 1916, Willett 1918, Keep and Baily 1935; *Laqueus californicus jeffreysi* (Dall). Oldroyd 1924; *Terebratula californianus* forma *vancouverensis* Davidson 1877; *Laqueus californicus vancouverensis* [sic] (Davidson). Oldroyd 1924, Thompson 1927; *Laqueus vancouverensis* [sic] (Davidson). Hatai 1936, Burch 1942; *Laqueus vancouveriensis* (Davidson 1887). Hertlein and Grant 1944, Bernard 1972, Roth 1972; *Laqueus vancouveriensis diegensis* Hertlein and Grant 1960.

Type locality: California. Distribution: Bering Sea to La Jolla, California; Sea of Japan; intertidal zone to 1500 m; abundant.

Family Terebrataliidae

Diestothyris frontalis (Middendorff, 1849).

Terebratula frontalis Middendorff 1849; *Terebratella frontalis*: Dall 1870, Davidson 1887; ?*Magasella aleutica* Dall (immature stage), Davidson 1887.

Type locality: South coast of the Okhotsk Sea. Distribution: Alaska to British Columbia; western North Pacific; 12–223 m.

Terebratalia transversa (Sowerby, 1846). Transverse lamp shell.

Terebratula transversa Sowerby 1846; *Terebratella transversa*: Gray 1853, Reeve 1860, Dall 1873, Whiteaves 1878, Davidson 1887 (in part, figs. 6–9 only); *Terebratulina transversa*: Dall 1907; *Magasella radiata* Dall 1877, Davidson 1887; *Terebratula transversa caurina* Gould 1850; *Terebratula caurina*: Gould 1852, Carpenter 1856 [*canrena*, sic]; *Terebratella caurina*: Gould 1850, Dall 1870, Thompson 1927; *Terebratella transversa* var. *caurina*: Davidson 1887; *Terebratalia transversa caurina*: Dall 1894, Oldroyd 1924, Fenton 1932, Hatai 1936, Nomura and Hatai 1937, Burch 1942, Gertlein and Grant 1944, Smith and Gordon 1948, Mattox 1956; *Terebratalia caurina*: Thompson 1927, Hatai 1936; *Terebratella coreanica*: Carpenter 1864 (non Adams and Reeve 1850); *Terebratalia transversa* var. *rubescens*: Dall 1910; *Terebratalia rubescens*: Hatai 1936; *Waldheimia grayi*: Carpenter 1864 (non Davidson 1852); *Terebratalia hemphilli* Dall 1902; *Terebratalia obsoleta*: DuBois (non Sowerby); *Terebratalia hemphillii* [sic]: Carson 1925.

Type locality: Puget Sound, Washington. The exact type locality was not designated by Sowerby. Distribution: Kodiak Island, Alaska, to Ensenada, Baja California, Mexico; lower intertidal zone to 1800 m.

Phylum Bryozoa—The Moss Animals

Bryozoan taxonomy is fraught with numerous problems (Dick and Mawatari, 2004), and it is clear that we are still in the discovery phase in the North Pacific. Several problematic species are not included in the list for these reasons. For example, there are unverified records of *Flustrellidra hispida* in Alaska (Kluge, 1962; Grischenko, 2002), but this species is more than likely restricted to the North Atlantic. There is not any published evidence that putative Pacific populations are morphologically similar to and conspecific with Atlantic populations. No one has examined *Flustrellidra* in the Bering Sea and eastern North Pacific in sufficient detail. Cook (1964:284) wrote that "I can find no evidence that *F. hispida* reaches the Pacific coast of North America." Recent research has shown that increased use of scanning electron microscopy (SEM) and genetic data may be needed to resolve these issues. Species identification in the field is nearly impossible, as most species require detailed examination using microscopy. About 10,941 species of bryozoans are extant (Zhang, 2011); approximately 272 species are represented in Alaskan waters (Table 1).

Several sources of primary and secondary literature were used to compile the information for the list of bryozoans: Osburn (1950, 1952, 1953, 1955), Kluge (1962), Dick and Ross (1988), Soule et al. (1995), Suwa et al. (1998), Grischenko (2002), Soule and Soule (2002), Dick et al. (2005), Dick (2008), and Dick et al. (2011). The higher classification follows that of the "Bryozoa–Annual Lists of References and Taxa" online publication.[17]

Order Cyclostomatida

Suborder Articulina

Family Crisiidae

Bicrisia edwardsiana (d'Orbigny, 1841).

Crisidia edwardsiana d'Orbigny 1841; *Crisia edwardsiana* (d'Orbigny 1841).

Type locality: Patagonia. Distribution: Widespread; Pacific coast of North America; Australia; New Zealand; South America; South Africa; Antarctica; littoral zone.

Crisia eburnea (Linnaeus, 1758).

Sertularia eburnea Linnaeus 1758.

Type locality: Europe. Distribution: Northern Alaska (Point Barrow) possibly south to British Columbia; North Atlantic; littoral zone.

Filicrisia franciscana (Robertson, 1910).

?*Crisidia gracilis* Trask 1857; *Crisia occidentalis*: Robertson 1903; *Crisia franciscana* Robertson 1910; *Crisidia franciscana*: O'Donoghue and O'Donoghue 1923.

Type locality: Named for San Francisco Bay, but first reported by Robertson from Orca, Alaska, to Channel Islands, southern California; type material is mixed in collections at CAS. Distribution: Alaska to Baja California, Mexico; intertidal zone to 100 m.

Suborder Cerioporina

Family Cerioporidae

Borgella pustulosa (Osburn, 1953).

Borgiola pustulosa Osburn 1953.

Type locality: Point Barrow, Alaska. Distribution: Arctic Alaska; littoral zone.

Borgella tumulosa Kluge, 1955.

Type locality: Bering Strait. Distribution: Chukchi Sea and Bering Strait; type material collected in 48 m.

Family Heteroporidae

Heteropora alaskensis Borg, 1933.

Heteropora pacifica var. *alaskensis* Borg 1933; *Heteropora pelliculata*: Robertson 1910 (in part).

Type locality: Middleton Island, Gulf of Alaska. Distribution: Gulf of Alaska to Oregon; shallow water.

Remarks: Osburn (1953) raised this variety to full species status but apparently did not examine any Alaskan specimens or designate a holotype. He based his description on specimens from Friday Harbor and British Columbia. The identity and distribution of all species of *Heteropora* reported from Alaska is open to question (Dick[18]).

Heteropora pacifica Borg, 1933. Northern staghorn bryozoan.

Heteropora pelliculata: Robertson 1910 (in part), O'Donoghue 1923 (in part); *Tretocycloecia pelliculata*: O'Donoghue 1925 (in part).

Type locality: Not traced. Distribution: Northern Alaska to ?California; shallow subtidal zone to 27 m.

Suborder Fasciculina

Family Frondiporidae

Filifascigera fasciculata (Hincks, 1880).

Stomatopora fasciculata Hincks 1880; *Proboscina fasciculata*: O'Donoghue 1926.

Type locality: Eastern North Atlantic (Great Britain). Distribution: Alaska to Washington; eastern North Atlantic; littoral zone.

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[17] Bock, Phil (editor). Bryozoa - Annual Lists of References and Taxa web site. [Available at http://bryozoa.net/annual/index.html, accessed May 2016.]

[18] Dick, M. H. 2012. Personal commun. Division of Biological Sciences, Graduate School of Science, Hokkaido University, Sapporo 060-0810, Japan.

Suborder Rectangulata

Family Lichenoporidae

Disporella alaskensis Osburn, 1953.

Type locality: Stepovak Bay, western Gulf of Alaska. Distribution: Known only in Alaskan waters; 18–27 m.

?Disporella canaliculata (Busk, 1876).

Discoporella canaliculata Busk 1876; *Lichenopora grignonensis*: Ridley 1881; *Lichenopora fimbriata*: Borg 1926; *Lichenopora canaliculata*: Borg 1944, Osburn 1953.

Type locality: Indian Ocean. Distribution: Point Barrow, Alaska; Antarctic and far southern waters; Kerguelen Island; Strait of Magellan; Cape Adare; Victoria Land; New South Wales; 34–159 m.

Disporella hispida (Fleming, 1828).

Discopora hispida Fleming 1828; *Discoporella hispida*: Smitt 1867; *Lichenopora hispida*: Hincks 1880.

Type locality: Europe. Distribution: Arctic-boreal, including Alaska to southern California; 15–366 m.

Fungella dalli Kluge, 1955.

Type locality: Not traced. Distribution: Pacific high boreal; Chukchi Sea; depth unknown.

Lichenopora crassiuscula (Smitt, 1867).

Discoporella crassiuscula Smitt 1867.

Type locality: Scandinavia. Distribution: Arctic, circumpolar; 11–225 m.

Patinella verrucaria (Linnaeus, 1758).

Madrepora verrucaria Linnaeus 1758; *Discoporella verrucaria*: Smitt 1867; *Lichenopora verrucaria*: Hincks 1880.

Type locality: Mediterranean Sea. Distribution: Arctic-boreal, circumpolar; 0–700 m.

Suborder Tubuliporina

Family Annectocymidae

Entalophorecia deflexa (Couch, 1842).

Type locality: Great Britain. Distribution: Boreal-Arctic; Gulf of Mexico; 3–31 m.

Family Diaperoeciidae

Diaperoecia intermedia (O'Donoghue, 1923).

Tubulipora intermedia O'Donoghue 1923.

Type locality: Departure Bay, British Columbia. Distribution: Point Barrow, Alaska, to British Columbia; littoral zone.

Diaperoecia johnstoni (Heller, 1867).

Criserpia johnstoni Heller 1867; *Stomatopora johnstoni*: Hincks 1880, O'Donoghue 1923; *Diaperoecia johnstoni*: O'Donoghue 1926; *Entalophoroecia johnstoni*: Austin 1985.

Type locality: Adriatic Sea. Distribution: Alaska, eastern Bering Sea, to Washington State; North Atlantic; littoral zone.

Family Diastoporidae

Diplosolen harmelini Soule, Soule, and Chaney, 1995.

Non *Tubulipora obelia* Johnston 1838; non *Diplosolen obelia*: Hayward and Ryland 1985; *?Diastopora obelia*: O'Donoghue and O'Donoghue 1923; *?Diplosolen obelium*: O'Donoghue and O'Donoghue 1925, 1926; *Diplosolen obelium*: Osburn 1953.

Type locality: Point Barrow, Alaska. Distribution: Arctic Alaska to Santa Cruz Island in the Channel Islands off southern California; shallow water to 160 m.

Diplosolen obelia var. ***arctica*** Waters, 1904.

Type locality: Franz Josef Land. Distribution: Arctic, circumpolar, including northern coast of North America, Chukchi, and Bering seas; 36–1000 m.

Family Entalophoridae

Entalophora capitata Robertson, 1900.

Type locality: Sitka or Juneau, Alaska. Distribution: Southeastern Alaska to British Columbia; littoral zone.

Family Oncousoeciidae

Oncousoecia canadensis Osburn, 1933.

Stomatopora diastoporides: Whiteaves 1901.

Type locality: Gulf of St. Lawrence. Distribution: Arctic Alaska; Mount Desert Island, Maine; Bay of Fundy; eastern North Atlantic; to a depth of 91 m.

Oncousoecia diastoporides (Norman, 1868).

Alecto diastoporides Norman 1868; *Stomatopora diastoporides*: Hincks 1880, Osburn 1912.

Type locality: Shetland Islands. Distribution: Arctic Alaska to Washington; North Atlantic; littoral zone.

Oncousoecia polygonalis (Kluge, 1915).

Stomatopora polygonalis Kluge 1915; *Tubulipora lobulata* Osburn 1933.

Type locality: Kola Bay, Barents Sea. Distribution: Arctic; Chukchi and Barents seas; Bering Strait; Gulf of St. Lawrence; 15–324 m.

Proboscina incrassata Smitt, 1867.

Tubulipora (Proboscina) incrassata Smitt 1871; *Alecto retiformis* Hincks 1871; *Stomatopora incrassata*: Hincks 1880, O'Donoghue 1923; *Proboscina incrassata*: O'Donoghue 1926.

Type locality: Spitsbergen. Distribution: Arctic Alaska to British Columbia; Norway; Novaya Zemlya; Kara Sea; British Islands from Cornwall to Scotland and the Shetland Islands; littoral zone.

Family Plagioeciidae

Plagioecia ambigua Osburn, 1953.

Type locality: Point Barrow, Alaska. Distribution: Amerasian Arctic; type material collected at 40 m.

Plagioecia patina (Lamarck, 1816).

Tubulipora patina Lamarck 1816; *Diastopora patina* (Lamarck 1816); *Berenicea patina* (Lamarck 1816).

Type locality: Europe. Distribution: Alaska to southern California; North Atlantic; littoral zone.

Family Tubuliporidae

Bathysoecia bassleri Osburn, 1953.

Type locality: Lenard Harbor, Cold Bay, Alaska. Distribution: Alaska to Puget Sound; to a depth of about 50 m.

Bathysoecia hastingsae Osburn, 1953.

Tubulipora (Tubularia by error) *lobulata*: Osburn 1933; ?*Tubulipora lobulata*: Whiteaves 1874.

Type locality: Nunivak Island, Bering Sea. Distribution: Chukchi and Bering seas; Atlantic coast from Mount Desert Island, Maine; Gaspe (Canada), and Greenland; to a depth of about 20 m.

Pleuronea fenestrata (Busk, 1859).

Idmonea fenestrata Busk 1859; *Idmidronea fenestrata* (Busk 1859).

Type locality: England. Distribution: Widely distributed in the Arctic; Barents, Kara, and Laptev seas; western Greenland; northern Bering Sea; 9–360 m.

Tubulipora flabellaris (O. Fabricius, 1780).

Tubipora flabellaris Fabricius 1780.

Type locality: Greenland. Distribution: Boreal-Arctic circumpolar; to a depth of 55 m.

Order Ctenostomatida

Suborder Alcyonidiina

Superfamily Alcyonidioidea

Family Alcyonidiidae

Alcyonidioides mytili (Dalyell, 1848).

Alcyonidium mytili Dalyell 1848.

Type locality: Scotland. Distribution: Circumpolar and Arctic-boreal; in the eastern North Pacific south to Queen Charlotte Islands, British Columbia; 5–315 m.

Alcyonidium disciforme Smitt, 1872.

Type locality: Barents Sea. Distribution: Arctic, circumpolar, including the Chukchi Sea and Bering Strait; 1–570 m.

Alcyonidium enteromorpha Soule, 1951. Noodle bryozoan.

Type locality: Point Barrow, Alaska. Distribution: Chukchi Sea; Norton Sound; to a depth of 225 m.

Alcyonidium gelatinosum (Linnaeus, 1761).

Alcyonium gelatinosum Linnaeus 1761; *Halodactyle diaphane* Van Beneden 1845; *Alcyonidium reticulum* Ryland and Porter 2000.

Type locality: Eastern North Atlantic Ocean ("*Habitat In Oceano Europaeo*"). Distribution: Circumpolar and Arctic-boreal; in the eastern North Pacific south to Queen Charlotte Islands, British Columbia; 1–475 m.

Alcyonidium mamillatum Alder, 1857.

Type locality: Northumberland (North Sea). Distribution: Widely distributed in the Arctic including Beaufort and Chukchi seas; Bering Strait; western North Pacific; North Atlantic; 4–220 m.

Remarks: Lives on hydroids, ascidia, and shells.

Alcyonidium pedunculatum Robertson, 1902. Smooth leather bryozoan.

Type locality: Pribilof Islands, Alaska. Distribution: Arctic Alaska to British Columbia, Canada; 37–64 m.

Alcyonidium (Paralcyonidium) vermiculare Okada, 1925.

Type locality: Sea of Japan. Distribution: Bering Strait and Sea of Japan; 54–119 m.

Remarks: Lives on shells and stones.

Suborder Flustrellidrina

Superfamily Flustrellidroidea

Family Flustrellidridae

Flustrellidra cervicornis (Robertson, 1900).

Alcyonidium cervicornis Robertson 1900; *Flustrella cervicornis* (Robertson 1900).

Type locality: Orca or Juneau, Alaska. Distribution: Bering Sea (Bering Island) to coastal waters of southern Alaska; depth unknown.

Flustrellidra corniculata (Smitt, 1872). Spiny leather bryozoan.

Flustrella corniculata Smitt 1872.

Type locality: Barents Sea. Distribution: Arctic Ocean south to the Aleutian Islands in the eastern North Pacific and to Kamchatka and the Commander Islands in the western North Pacific; North Atlantic; to a depth of 52 m.

Flustrellidra gigantea (Silén, 1947).

Flustrella gigantea Silén 1947.

Type locality: Bering Sea. Distribution: Chukchi Sea and Bering Strait to the coast of southern Alaska; 37–47 m.

Flustrellidra vegae (Silén, 1947).

Flustrella vegae Silén 1947.

Type locality: Bering Sea. Distribution: Pacific boreal; Bering Sea and near Unalaska Island, Alaska; 37–47 m.

Suborder Stolonifera

Family Vesiculariidae

Bowerbankia composita Kluge 1955.

Type locality: Spitsbergen. Distribution: Chukchi Sea; Bering Strait; Bering Sea; Barents Sea; 43–100 m.

Remarks: Lives on stones.

Bowerbankia imbricata (Adams, 1798).

Sertularia imbricata Adams 1798.

Type locality: Eastern North Atlantic. Distribution: Alaska to Washington; North Atlantic; 0–53 m.

Remarks: Lives on fuci, hydroids, Bryozoa, and stones.

Vesicularia fasciculata Soule, 1953.

Type locality: Point Barrow, Alaska. Distribution: High boreal-Arctic; to a depth of about 100 m.

Suborder Victorellina

Superfamily Victorelloidea

Family Nolellidae

Nolella dilatata (Hincks, 1860).

Cylindroecium dilatatum Hincks 1860.

Type locality: Europe. Distribution: Arctic-boreal, including Bering Sea and northern coastal areas of North America; 15–235 m.

Remarks: Lives on algae, hydroids, Bryozoa, and shells.

Nolella stipata Gosse, 1855.

Type locality: Weymouth Bay, England. Distribution: Alaska to southern California; North Atlantic; depth unknown.

Order Cheilostomatida

Suborder Malacostegina

Superfamily Membraniporoidea

Family Electridae

Conopeum reticulum (Linnaeus, 1767).

Millepora reticulum Linnaeus 1767; *Flustra lacroixii* Audouin 1826; *Conopeum lacroixii* (Audouin 1826); *Membranipora lacroixii* (Audouin 1826).

Type locality: Europe. Distribution: Cosmopolitan; littoral zone.

Einhornia arctica (Borg, 1931).

Electra crustulenta var. *arctica* Borg 1931; *Membranipora monostachys* Busk 1854.

Type locality: Eastern North Atlantic. Distribution: Arctic, circumpolar; 7–520 m.

Einhornia crustulenta (Pallas, 1766).

Eschara crustulenta Pallas 1766; *Electra crustulenta* var. *arctica*: Osburn 1950; *Electra crustulenta* forma *typica*: Kluge 1975; *Electra crustulenta*: Mawatari 1974, *et auctt.*

Type locality: Atlantic Ocean. Distribution: Circumpolar, Arctic-boreal; in the eastern Pacific from Point Barrow, Alaska, to Dillon Beach, California; midlittoral zone.

Einhornia venturaensis (Banta and Crosby, 1994).

non *Eschara crustulenta* Pallas 1766; ?*Membranipora crustulenta* var. *arctica* Borg 1931; *Electra crustulenta* var. *arctica*: Osburn 1950 (in part); ?*Electra crustulenta*: Dick and Ross 1985, Dick and Ross 1988.

Type locality: Rincon Beach, California. Distribution: Alaskan waters to southern California; depth unknown.

Family Membraniporidae

Membranipora pachytheca Osburn, 1950.

Type locality: Canoe Bay, Alaska. Distribution: Known only from type locality; 73 m; rare.

Membranipora villosa Hincks, 1880.

Membranipora membranacea: Hincks 1882, Robertson 1908, O'Donoghue and O'Donoghue 1923, Osburn 1950 (non Linnaeus); *Membranipora membranacea* forma *serrata* Hincks 1882; *Membranipora serrata*: Robertson 1908, O'Donoghue and O'Donoghue 1923; *Membranipora serrilamella* Osburn 1950; *Membranipora serrilamella*: Soule et al. 1995.

Type locality: California. Distribution: Pribilof Islands, Bering Sea, and Yakutat, Alaska, south to southern California; southern Hokkaido south to Wakayama Prefecture on the Pacific side and Ishikawa Prefecture on the Sea of Japan, Honshu, Japan; littoral zone; lives on algae.

Remarks: Dick et al. (2005) noted that many questions remain concerning the taxonomy of eastern North Pacific *Membranipora*.

Suborder Neocheilostomatina

Superfamily Buguloidea

Family Beaniidae

Beania alaskensis Osburn, 1950.

Type locality: Shuyak Strait, Afognak Island, Alaska. Distribution: Known only from Alaska; depth unknown.

Family Bugulidae

Bugula pacifica Robertson, 1905.

Bugula purpurotincta: Robertson 1905.

Type locality: Originally reported from the Pribilof Islands, Bering Sea, Puget Sound, San Francisco Bay and Dillon Beach, California, without a designated type locality. Distribution: Known from the Chukchi Sea south to the Channel Islands, southern California; introduced in the western Pacific (Dick[16]); littoral zone; common.

Remarks: Records of *Bugula californica* Robertson, 1905 in Alaska are probably *B. pacifica* (Dick[16]). The distribution of *B. californica* is from British Columbia to the Channel Islands, southern California, with unverified records farther south.

Bugula pugeti Robertson, 1905.

Bugula flabellata: Robertson 1900.

Type locality: Originally reported from Channel Rocks and San Juan Island, Puget Sound (type locality was not stated). Distribution: Sitka, Alaska, to San Francisco Bay, California; littoral zone.

Bugula tschukotkensis Kluge, 1952.

Type locality: Southeastern part of the Chukchi Sea. Distribution: Known only from type locality; 53 m; rare.

Corynoporella spinosa Robertson, 1905.

Type locality: Alaska. Distribution: Alaska to British Columbia; littoral zone.

Corynoporella tenuis Hincks, 1888.

Corynoporella spinosa Robertson 1905.

Type locality: Gulf of St. Lawrence. Distribution: Arctic-boreal, including the Bering Sea and the northern coast of Alaska and British Columbia; 80–170 m.

Dendrobeania exilis (Hincks, 1882).

Membranipora exilis Hincks 1882; *Callopora exilis*: Austin 1985.

Type locality: Queen Charlotte Islands, British Columbia. Distribution: Aleutian Islands; British Columbia; Commander Islands; littoral zone.

Dendrobeania fessa Kluge, 1955.

Dendrobeania pseudomurrayana var. *fessa* Kluge 1955; *Bugula murrayana*: Hincks 1880, Osburn 1912.

Type locality: Arctic Ocean. Distribution: Arctic-boreal; Chukchi Sea; Bering Strait; Barents and Kara seas; Davis Strait; White Sea; western Greenland; Labrador; eastern Greenland; Iceland; Great Britain; German Sea, and northern Norway; 3–320 m.

Dendrobeania flustroides (Levinsen, 1887).

Bugula murrayana var. A (*flustroides*) Levinsen 1887.

Type locality: Not traced. Distribution: Pacific boreal-Arctic; 29–104 m.

Dendrobeania fruticosa (Packard, 1863).

Menipea fruticosa Packard 1863; *Bugula murrayana* var. A Hincks 1880.

Type locality: Labrador. Distribution: Arctic-boreal, including Chukchi Sea; Bering Strait; northern coast of North America; 2–330 m.

Dendrobeania levinseni (Kluge, 1929).

Bugula levinseni Kluge 1929; *Bugula murrayana* var. A Levinsen 1887.

Type locality: Siberia. Distribution: Arctic, Pacific; Chukchi, Bering, Laptev, Barents, Kara, and East Siberian seas; 15–142 m.

Dendrobeania lichenoides (Robertson, 1900). Leaf crust bryozoan.

Flustra lichenoides Robertson 1900.

Type locality: Originally reported from Alaska to San Francisco, California, without designation of a type locality. Distribution: Kodiak Island, southern Alaska, to central California; Commander Islands; to a depth of 100 m.

Dendrobeania multiseriata O'Donoghue, 1925.

Type locality: St. Paul Island, Bering Sea, Alaska. Distribution: Known only from type locality; rare.

Dendrobeania murrayana (Johnston, 1847). Fan bryozoan.

Flustra murrayana Johnston 1847; *Bugula murrayana*: Busk 1852; non *Bugula murrayana*: Levinsen 1887; *Dendrobeania orientalis* Kluge 1952.

Type locality: Eastern North Atlantic. Distribution: Arctic-boreal; Chukchi and Bering seas; southern coast of Alaska; Barents Sea; White Sea; Kara Sea; western Greenland; Finnmark and Boguslen; North Sea; Great Britain; 9–320 m.

Dendrobeania pseudolevinseni Kluge, 1952.

Type locality: Southern Chukchi Sea. Distribution: Pacific boreal; 37–53 m.

Dendrobeania quadridentata (Loven, 1834).

Cellularia quadridentata Loven 1834; *Dendrobeania fruticosa* var. *quadridentata*: Kluge 1975.

Type locality: Boguslen, Norway. Distribution: Arctic; Bering Sea and Bering Strait; Barents, Kara, Laptev, and Okhotsk seas; Labrador; Davis Strait; Archipelago of the Canadian Islands and Hudson Bay; western and eastern Greenland; 15–150 m.

Kinetoskias beringi Kluge, 1953.

Type locality: Okhotsk Sea. Distribution: Bering and Okhotsk seas; 3400–3812 m.

Family Candidae

Caberea ellisii (Fleming, 1814).

Flustra ellisii Fleming 1814.

Type locality: Shetland Islands, Scotland. Distribution: Arctic-boreal; Alaska to Baja California, Mexico; western North Pacific; north of Cape Cod and north from the British Isles; intertidal zone to 240 m.

Notoplites sibiricus (Kluge, 1929).

Scrupocellaria sibirica Kluge 1929.

Type locality: Laptev Sea. Distribution: Chukchi, Barents, Kara, and Laptev seas; 40–598 m.

Scrupocellaria arctica (Busk, 1855).

Menipa arctica Busk 1855.

Type locality: Western Greenland. Distribution: Widespread boreal-Arctic; 8–49 m.

Scrupocellaria elongata (Smitt) var. ***congesta*** Norman, 1903.

Cellularia scabra forma *elongata* Smitt 1868; *Scrupocellaria scabra* van Beneden var. *septentrionalis* subvar. *congesta* Norman 1903; *Tricellaria erecta*: Osburn 1950, Mawatari 1956, McCain and Ross 1974; *Scrupocellaria arctica*: Kluge 1975, Dick and Ross 1986.

Type locality: East Finnmark (eastern North Atlantic). Distribution: Arctic-boreal, circumpolar, including Point Barrow, Alaska, to Puget Sound, Washington; littoral zone.

Scrupocellaria scabra (van Beneden, 1848).

Cellarina scabra van Beneden 1848; *Cellularia scabra*: Smitt 1867.

Type locality: Eastern North Atlantic (Belgium). Distribution: Arctic-boreal, circumpolar; 0–228 m.

Scrupocellaria scabra var. ***paenulata*** Norman, 1903.

Type locality: Barents Sea. Distribution: Arctic, circumpolar, including Chukchi and Bering seas; 1–454 m.

Semibugula birulai Kluge, 1929.

Type locality: Siberia. Distribution: Arctic-boreal, Pacific; 9–170 m.

Tricellaria erecta (Robertson, 1900).

Menipea erecta Robertson 1900; *Scrupocellaria scabra*: Robertson 1900; *Menipea erecta*: O'Donoghue 1923, 1926.

Type locality: Alaska. Distribution: Point Barrow, Alaska, to Puget Sound, Washington; Kuril Islands, Japan; littoral zone.

Tricellaria gracilis (Van Beneden, 1848).

Menipea ternata: Hincks 1884; *Menipea ternata gracilis*: Robertson 1900; *Menipea gracilis*: Robertson 1905, O'Donoghue 1923.

Type locality: Franz Josef Land. Distribution: Arctic, circumpolar; 0–869 m.

Tricellaria peachii (Busk, 1851).

Cellularia peachi Buck 1851; *Bugulopsis peachi*: Kluge 1975.

Type locality: Not traced. Distribution: Widespread boreal-Arctic; 5–450 m.

Tricellaria pribilofi (Robertson, 1905).

Menipea pribilofi Robertson 1905.

Type locality: Pribilof Islands, Bering Sea, Alaska. Distribution: Eastern Bering Sea to British Columbia; Aleutian Islands; littoral zone.

Tricellaria ternata (Solander, 1786).

Cellaria ternata Solander 1786.

Type locality: Aberdeen, Scotland. Distribution: Circumpolar, Arctic-boreal, including the Bering Sea to southern California; midlittoral zone.

Superfamily Calloporoidea

Family Calloporidae

Amphiblestrum auritum (Hincks, 1877).

Membranipora aurita Hincks 1877; *Callopora aurita* (Hincks 1877).

Type locality: Western North Europe. Distribution: Alaska; North Atlantic; littoral zone.

Amphiblestrum quadratum (Hincks, 1880).

Membranipora trifolium var. *quadrata* Hincks 1880; *Membranipora flemingii* forma *trifolium*: Smitt 1868 (in part); *Membranipora (Amphiblestrum) trifolium*: Marcus 1940; *Amphiblestrum trifolium* var. *quadrata*: Kluge 1975.

Type locality: Europe. Distribution: Arctic-boreal, including the Chukchi Sea and Bering Strait; 26–80 m.

Bidenkapia spitsbergensis (Bidenkap, 1897).

Membranipora arctica Smitt 1868; *Membranipora Spitsbergensis* Bidenkap 1897; *Callopora Spitsbergensis*: Nordgaard 1918.

Type locality: Barents Sea. Distribution: Arctic, circumpolar, including Chukchi and Bering seas and the northern coast of North America; 5–1000 m.

Callopora corniculifera (Hincks, 1884).

Membranipora corniculifera Hincks 1884.

Type locality: Queen Charlotte Islands, British Columbia. Distribution: Southern Alaska to southern California; littoral zone.

Callopora craticula (Alder, 1856).

Membranipora craticula Alder 1856.

Type locality: Northumberland (North Sea). Distribution: Circumpolar, Arctic-boreal; south to Ketchikan, Alaska in the eastern North Pacific; 5–280 m.

Callopora decidua Dick and Ross, 1988.

Callopora horrid: Dick and Ross 1986 (in part).

Type locality: Narrow Strait, Kodiak Island, Alaska. Distribution: Known only from type locality; infralittoral zone; rare.

Callopora lata (Kluge, 1907).

Type locality: Not traced. Distribution: Widespread boreal-Arctic; depth unknown.

Callopora lineata (Linnaeus, 1767).

Flustra lineata Linnaeus 1767; *Membranipora lineata*: Hincks 1880.

Type locality: Europe. Distribution: Arctic-boreal, circumpolar; 0–378 m.

Callopora nuda Dick and Ross, 1988.

Alderina sp. Dick and Ross 1986.

Type locality: East shore of Spruce Island near Kodiak, Alaska. Distribution: Known only from the Narrow Strait vicinity, Alaska; intertidal zone.

Callopora obesa Kluge, 1952.

Type locality: Bering Strait, between the Diomede Islands and Cape Prince of Wales. Distribution: Northern Bering Sea; to a depth of 50 m.

Callopora weslawski Kuklinski and Taylor, 2006.

non *Callopora whiteavesi* Norman 1903: Kluge 1962, 1975, Gostilovskaya 1964, 1978.

Type locality: Kara Sea. Distribution: Arctic circumpolar, including the Bering Strait; 27–51 m.

Cauloramphus cymbaeformis (Hincks, 1877).

Membranipora cymbaeformis Hincks 1877.

Type locality: Labrador, Canada. Distribution: Circumpolar, Arctic, including Chukchi and Bering seas; intertidal zone to 228 m.

Cauloramphus intermedius Kluge, 1962.

Type locality: Barents Sea. Distribution: Widespread in the Arctic, including the Chukchi Sea; northwestern coast of Alaska; 7–78 m.

Cauloramphus magnus Dick and Ross, 1988.

Cauloramphus cymbaeformis: Dick and Ross 1986.

Type locality: Kodiak, Alaska. Distribution: Gulf of Alaska (Kodiak and Ketchikan); littoral zone.

Cauloramphus multiavicularia Dick et al., 2005.

Membranipora spinifera: O'Donoghue and O'Donoghue 1923 (in part?); *Cauloramphus spinifer*: O'Donoghue and O'Donoghue 1926 (in part?); *Cauloramphus pseudospinifer*: Dick and Ross 1988.

Type locality: East Tongass Narrows, Ketchikan, Alaska. Distribution: Kodiak and Ketchikan, Alaska; littoral zone.

Cauloramphus pseudospinifer Androsova, 1958.

?*Membranipora spinifera*: O'Donoghue and O'Donoghue 1923; ?*Cauloramphus spinifer*: O'Donoghue and O'Donoghue 1926.

Type locality: Sea of Japan. Distribution: Boreal Pacific, including Kodiak Island, Alaska; intertidal zone; rare.

Cauloramphus spectabilis Dick and Ross, 1988.

Type locality: West shore of Sunny Cove, Spruce Island, near Kodiak, Alaska. Distribution: Known only from type locality; intertidal zone; rare.

Cauloramphus spiniferum (Johnston, 1832).

Membranipora spinifera Johnston 1832; non *Membranipora spinifera*: Robertson 1908, O'Donoghue and O'Donoghue 1923, 1926; non *Cauloramphus spiniferum*: Osburn 1950.

Type locality: North Durham, England. Distribution: Circumboreal, perhaps extending into the Arctic; intertidal zone to 50 m.

Remarks: Dick and Ross (1988:40) noted that "Because of the uncertainty associated with previous records, its range in the eastern Pacific needs to be reexamined."

Cauloramphus tortilis Dick et al., 2005.

Type locality: Ketchikan, Alaska. Distribution: Known only from type locality; rare.

Cauloramphus variegatus (Hincks, 1881).

Membranipora variegata Hincks 1881; *Cauloramphus spiniferum*: Osburn 1950; *Caulorhamphus brunnea*: Dick and Ross 1986.

Type locality: Santa Cruz, California. Distribution: Kodiak, Alaska, to Santa Cruz, California; intertidal zone.

Flustrellaria whiteavesi (Norman, 1903).

Callopora whiteavesi Norman 1903.

Type locality: Western Greenland. Distribution: Arctic, circumpolar; 10–520 m.

Septentriopora karasi Kuklinski and Taylor, 2006.

Membranipora macilenta Jullien: Waters 1900; *Callopora nigrans*: Norman 1903, Osburn 1923; *Membranipora nigrans*: Nordgaard 1906; *Hincksina nigrans*: Osburn 1950, Powell 1968; *Tegella nigrans*: Kluge 1962, Kluge 1975, Gostilovskaya 1978, Mawateri and Mawateri 1980.

Type locality: Hornsund, Spitsbergen. Distribution: Arctic circumpolar; Alaska; Canada; Greenland; Spitsbergen; Franz Josef Land; 5–233 m.

?***Septentriopora nigrans*** (Hincks, 1882).

Membranipora nigrans Hincks 1882; *Tegella nigrans* (Hincks 1882); *Callopora nigrans*: Norman 1903; *Membranipora macilenta* Waters 1900; *Hincksina nigrans*: Osburn 1952, Austin 1985.

Type locality: Queen Charlotte Islands, British Columbia, Canada. Distribution: ?Arctic-boreal, circumpolar; littoral zone.

Remarks: Kuklinski and Taylor (2006) noted that most specimens identified as this species are actually *Septentriopora karasi* or *S. denisenkoae*. Only two records are known of this species, one from British Columbia and a second from the St. Lawrence Estuary in Quebec, but further research might reveal a wider Arctic-boreal distribution.

Tegella amissavicularis (Kluge, 1952).

Callopora amissavicularis Kluge 1952.

Type locality: Bering Strait, between the Diomede Islands and Cape Prince of Wales. Distribution: Bering Strait; to a depth of 50 m.

Tegella anguloavicularis Kluge, 1952.

Type locality: Chukchi Sea. Distribution: Bering Strait; Chukchi and Bering (St. Lawrence Island, Gulf of Anadyr, Navarin Cape) seas; 30–60 m.

Remarks: Lives on flustrid bryozoans, mollusk shells, and stones.

Tegella aquilirostris (O'Donoghue and O'Donoghue, 1923).

Membranipora aquilirostris O'Donoghue and O'Donoghue 1923; *Tegella robertsonae*: Osburn 1950.

Type locality: Vancouver Island, British Columbia, Canada. Distribution: Boreal Pacific; southern Alaska to Puget Sound, Washington; Japan; littoral zone.

Tegella arctica (d'Orbigny, 1853).
Reptoflustra arctica d'Orbigny 1853.
Type locality: Houston-Stewart Channel, British Columbia. Distribution: Circumpolar, Arctic-boreal, in western North America from Point Barrow in the Arctic to British Columbia; 0–300 m.

Tegella armifera (Hincks, 1880).
Membranipora armifera Hincks 1880.
Type locality: Gulf of St. Lawrence. Distribution: Circumpolar, Arctic-boreal, in the eastern North Pacific from the Beaufort Sea and Point Barrow, Alaska, to San Pedro, California; 4–314 m.

Tegella horrida (Hincks, 1880).
Membranipora horrida Hincks 1880; *Callopora horrida*: Osburn 1950 *et. auctt.*; *Tegella robertsonae*: Osburn 1950; *Tegella aquilirostris*: Dick and Ross (in part).
Type locality: ?California. Distribution: Kodiak Island, Alaska, to California; Japan (Sea of Japan); littoral zone.

Tegella inermis Kluge, 1959.
Type locality: Bering Strait. Distribution: Chukchi Sea and Bering Strait; to a depth of 50 m.

Tegella magnipora Osburn, 1950.
Type locality: Canoe Bay, Alaska. Distribution: Point Barrow and Canoe Bay, Alaska; to a depth of 230 m.

Tegella retroversa Kluge, 1952.
Type locality: Bering Strait. Distribution: Chukchi, Bering, Barents, Kara, East Siberian, and Okhotsk seas; 3–40 m.

Tegella unicornis (Fleming, 1828).
Flustra unicornis Fleming 1828; *Membranipora unicornis*: Hincks 1884.
Type locality: Europe. Distribution: Amphi-boreal (Alaska to California in the eastern North Pacific); Arctic (Barents Sea, western Greenland, Iceland); 5–120 m.

Family Doryporellidae

Doryporella spathulifera (Smitt, 1868).
Lepralia spathulifera Smitt 1868; *Membranipora (Callopora) spathulifera*: Levinsen 1914; *Microporella spathulifera* Waters 1900.
Type locality: Barents Sea. Distribution: Circumpolar, Arctic, including Chukchi and Bering seas; 20–300 m.
Remarks: Lives on shells and stones.

Superfamily Catenicelloidea

Family Eurystomellidae

Integripelta bilabiata (Hincks, 1884). Derby hat bryozoan.
Lepralia bilabiata Hincks 1884; *Eurystomella bilabiata*: Canu and Bassler *et auctt.*
Type locality: Queen Charlotte Islands, British Columbia. Distribution: Nootka Island, Alaska, to Navidad Head, Tenacatita, Mexico; Sea of Japan; intertidal zone to 237 m.

Superfamily Celleporoidea

Family Celleporidae

Buffonellaria arctica Berning and Kuklinski, 2008.
Schizoporella biaperta (Michelin 1848): Nordgaard 1906, Kluge 1975, Gostilovskaya 1978.
Type locality: Spitsbergen. Distribution: Arctic circumpolar; 25–165 m.

Celleporina aspera Dick and Ross, 1988.
Costazia ventricosa: Osburn 1952 (in part), Dick and Ross 1986.
Type locality: Eastern shore of Termination Point, Kodiak Island, Alaska. Distribution: Widespread in Alaska; the southern extent of the range is unknown; littoral zone.

?***Celleporina incrassata*** (Lamarck, 1816).
Cellepora incrassata Lamarck 1816.
Type locality: Mediterranean Sea. Distribution: ?Bering Strait and Bering Sea; depth unknown.
Remarks: The current status of this species is not known; reports from the North Pacific are dubious.

Celleporina nordenskjoldi (Kluge, 1929).
Cellepora nordenskjoldi Kluge 1929.
Type locality: East Siberian Sea. Distribution: Arctic-boreal: Chukchi, Bering, Okhotsk, Laptev, and East Siberian seas; 16–146 m.

Celleporina robertsoniae (Canu and Bassler, 1923).
Cellepora costazi: Robertson 1908 (in part); *Costazzia robertsoniae* Canu and Bassler 1923; *Costazia robertsoniae*: Osburn 1952 (in part); *Celleporina ventricosa*: Morris 1979 (in part).
Type locality: Santa Monica, California. Distribution: Southern Alaska to southern California; shallow waters to 100 m.

Celleporina surcularis (Packard, 1863).
Celleporaria incrassata: Smitt 1868 (in part); *Cellepora incrassata*: Nordgaard 1905, Waters 1900; *Cellepora cervicornis* Busk 1880, Lorenz 1886; *Cellepora surcularis*: Kluge 1975; *Costazia surcularis*: Austin 1985.
Type locality: Labrador, Canada. Distribution: Arctic,

circumpolar, including Chukchi and Bering seas; 7–450 m.

Celleporina ventricosa (Lorenz, 1886). Rusty or coral bryozoan.

Cellepora ventricosa Lorenz 1886; *Costazia ventricosa*: Austin 1985.

Type locality: Jan Mayen Island. Distribution: Arctic, circumpolar, including Chukchi and Bering seas; 12–460 m.

Family Hippoporidridae

Hippoporella fastigatoavicularis (Kluge, 1955).

Lepraliella fastigatoavicularis Kluge 1955.

Type locality: Northern Bering Sea. Distribution: Bering Sea and Bering Strait; to a depth of 51 m.

Hippoporella hippopus (Smitt, 1867).

Lepralia hippopus Smitt 1867; *Lepraliella hippopus*: Levinsen 1916; *Hippoponella hippopus*: Osburn 1933.

Type locality: Northern Norway. Distribution: Arctic, circumpolar, including Chukchi and Bering seas; 14–235 m.

Hippoporidra truculenta Dick and Ross, 1988.

Hippoporinid sp. Dick and Ross 1986.

Type locality: Makushin Bay, Unalaska Island, Alaska. Distribution: Narrow Strait, Kodiak, Alaska, and Unalaska Island; littoral zone; uncommon.

Family Phidoloporidae

Phidolopora pacifica (Robertson, 1908). Lattice-work bryozoan.

Retepora pacifica Robertson 1908.

Type locality: California. Distribution: North Alaska to Peru; Galapagos Islands; subtidal zone to 200 m.

Rhynchozoon bispinosum (Johnston, 1849).

Lepralia bispinosa Johnston 1849; *Rhynchopora bispinosa*: Hincks 1880.

Type locality: Western Europe. Distribution: Alaska to British Columbia; North Atlantic; littoral zone.

Rhynchozoon glabrum Dick, Grischenko and Mawatari, 2005.

Type locality: Ketchikan, Alaska. Distribution: Ketchikan to the Queen Charlotte Islands, British Columbia; littoral zone; uncommon.

Rhynchozoon rostratum (Busk, 1855). Yellow encrusting bryozoan.

Lepralia rostrata Busk 1855; *Schizoporella tumulosa* Hincks 1882; *Rhynchozoon tumulosum*: Osburn 1952, Soule and Duff 1957, McCain and Ross 1974.

Type locality: Mazatlan, Mexico. Distribution: Alaska to Panama and South America; shallow waters to 200 m.

Rhynchozoon tumulosum (Hincks, 1882).

Schizoporella tumulosa Hincks 1882; *Rhynchozoon rostratum*: Soule and Soule 1964 (in part), Dick and Ross 1988.

Type locality: Queen Charlotte Islands, British Columbia. Distribution: Western Gulf of Alaska to California; littoral zone; uncommon.

Superfamily Cribrilinoidea

Family Cribrilinidae

Cribrilina annulata (O. Fabricius, 1780).

Cellepora annulata O. Fabricius 1780; *Escharipora annulata*: Smitt 1868.

Type locality: Western Greenland. Distribution: Arctic-boreal, circumpolar, including Point Barrow, Alaska, to British Columbia; littoral zone; common.

Cribrilina corbicula (O'Donoghue and O'Donoghue, 1923).

Membraniporella corbicula O'Donoghue and O'Donoghue 1923.

Type locality: Nanaimo, British Columbia. Distribution: Eastern Aleutian Islands to Washington State; intertidal zone; uncommon.

Cribrilina spitsbergensis Norman, 1903.

Cribrilina annulata var. *spitsbergensis* Norman 1903; *Reginella spitsbergensis*: Osburn 1950.

Type locality: Greenland. Distribution: Widespread in the Arctic, including Chukchi and Bering seas; 30–327 m; more prominent in the Eastern Hemisphere of the Arctic region.

Jullienula hippocrepis (Hincks, 1882).

Cribrilina hippocrepis Hincks 1882; *Cribrilina annulata*: Robertson 1900; ?*Cribrilina hippocrepis*: Robertson 1908; *Lepralia regularis* O'Donoghue and O'Donoghue 1923; *Lyrula hippocrepis*: O'Donoghue and O'Donoghue 1926, Osburn 1950; *Reginella (Jullienula) hippocrepis*: Soule et al. 1996.

Type locality: Queen Charlotte Islands, British Columbia. Distribution: Alaskan waters south to southern California; shallow waters to 160 m.

Membraniporella crassicosta Hincks, 1888.

Type locality: Gulf of St. Lawrence Distribution: ?Circumpolar, including northwestern Alaska; littoral zone.

Puellina caesia Dick, Grischenko and Mawatari, 2005.

Puellina setosa: Osburn 1950 (in part?).

Type locality: East Tongass Narrows site near Ketchikan, Alaska. Distribution: Known only from type locality; intertidal zone; uncommon.

Superfamily Flustroidea

Family Flustridae

Carbasea carbasea (Ellis and Solander, 1786).

Flustra carbasea Ellis and Solander 1786; *Flustra papyrea* Smitt 1868.

Type locality: Aberdeen and Edinburgh, eastern North Atlantic. Distribution: Arctic-boreal, circumpolar, including the Chukchi, Beaufort, and Bering seas; Bering Strait; 3–230 m.

Flustra nordenskjoldi Kluge, 1929.

Carbasea nordenskjoldi (Kluge 1929).

Type locality: East Siberian Sea. Distribution: Arctic-boreal, Pacific, including the Chukchi and Bering seas; 3–110 m.

Hincksina gothica Osburn, 1953.

Type locality: Point Barrow, Alaska. Distribution: Arctic; 10–160 m.

Hincksina longiavicularia Gontar, 1982.

Type locality: Kuril Islands. Distribution: Pacific boreal; Kodiak, Prince William Sound, and Ketchikan, Alaska; Kuril and Commander Islands; infralittoral zone; uncommon.

Securiflustra securifrons (Pallas, 1766).

Eschara securifrons Pallas 1766; *Flustra truncata* Linnaeus 1767; *Flustra securifrons*: Smitt 1868, Levinsen 1894, Kluge 1975.

Type locality: Europe. Distribution: Arctic-boreal, circumpolar, including the Chukchi Sea, Bering Strait, and northern Bering Sea; 10–300 m.

Serratiflustra serrulata (Busk, 1880).

Flustra serrulata Busk 1880; *Membranipora serrulata*: Levinsen 1887; *Flustra Spitsbergensis* Bidenkap 1897; *Flustra carbasea* var. *Spitsbergensis* Nordgaard 1918.

Type locality: Archipelago of the Canadian Islands, Arctic Ocean. Distribution: High Arctic, circumpolar, including Chukchi, Beaufort, and Bering seas; 5–195 m.

Terminoflustra membranaceotruncata (Smitt, 1868).

Flustra membranaceo-truncata Smitt 1868.

Type locality: Barents Sea. Distribution: Circumpolar, Arctic-boreal, in the eastern North Pacific known from Chukchi and Bering seas to British Columbia; 1.5–520 m.

Superfamily Hippothooidea

Family Hippothoidae

Celleporella hyalina (Linneaus, 1767). Glassy-white encrusting bryozoan.

Cellepora hyalina Linneaus 1767; *Schizoporella hyalina*: Hincks 1883; *Hippothoa hyalina*: Canu and Bassler 1923; *Hippothoa hyalina* var. *rugosa* Canu and Bassler 1923.

Type locality: Encrusting on the marine alga *Milleporae coriaceae* ("*Habitat in Milleporae coriaceae pagina inferiore, frequens in Oceano*"). Distribution: Alaska to California, and possibly to the Galapagos Islands; western Atlantic from Canada to Massachusetts; eastern Atlantic from the Arctic to the Bay of Biscay; intertidal zone to 130 m.

Celleporella nodasakae Dick, Grischenko and Mawatari, 2005.

Type locality: Settlers Cove near Ketchikan, Alaska. Distribution: Known only from type locality; intertidal and littoral zones; rare.

Celleporella reflexa Dick and Ross, 1988.

Celleporella hyalina: Dick and Ross 1986 (in part).

Type locality: East shore of Spruce Island near Kodiak, Alaska. Distribution: Eastern Aleutian Islands to southeastern Alaska; intertidal and littoral zones.

Hippothoa divaricata arctica Kluge, 1906.

Hippothoa hyalina var. *divaricata*: Smitt 1868.

Type locality: Barents Sea. Distribution: Arctic, circumpolar, including Chukchi and the northern Bering seas; 10–160 m.

Hippothoa expansa Dawson, 1859.

Hippothoa divaricata var. *expansa*: Verrill 1885.

Type locality: Gulf of St. Lawrence, western North Atlantic. Distribution: High Arctic, circumpolar; littoral zone.

Hippothoa mawatarii Dick and Ross, 1988.

Hippothoa sp. Dick and Ross 1986.

Type locality: East shore of Spruce Island, near Kodiak, Alaska. Distribution: Kodiak and Dutch Harbor, Alaska; littoral zone; common.

Superfamily Lepralielloidea

Family Bryocryptellidae

Cystisella bicornis Osburn, 1952.

Type locality: Point Barrow, Alaska. Distribution: North Alaska to southern Alaska; littoral zone.

Cystisella saccata (Busk, 1856).

Eschara saccata Busk 1856; *Porella saccata*: Kluge 1975.

Type locality: Norway. Distribution: Arctic, circumpolar; 1–288 m.

Porella acutirostris Smitt, 1868.

Type locality: Barents Sea. Distribution: Arctic-boreal, circumpolar; 0–395 m; uncommon.

Porella alba Nordgaard, 1906.

Porella minuta: Osburn 1953.

Type locality: Norway. Distribution: Circumpolar, primarily Arctic; Kodiak Island is the southernmost limit in the eastern Pacific; littoral zone; common.

Porella aperta (Boeck, 1862).

Lepralia aperta Boeck 1862; *Porella laevis* forma *Lepraliae* Smitt 1868 (in part); *Porella inflata* Waters 1900 (*fide* Kluge 1975); *Porella concinna*: Bidenkap 1900, Andersson 1902.

Type locality: North Atlantic Arctic. Distribution: Widely distributed in the Arctic, including Arctic Alaska; 19–160 m.

Porella belli (Dawson, 1859).

Lepralia belli Dawson 1859.

Type locality: North Atlantic. Distribution: Arctic, circumpolar, including the Bering Strait; littoral zone.

Porella columbiana O'Donoghue and O'Donoghue, 1923.

Type locality: Vancouver Island, British Columbia. Distribution: Kodiak Island, Alaska, to southern California; Galapagos Islands; littoral zone; uncommon.

Porella compressa (J. Sowerby, 1805). Flattened bryozoan.

Millepora compressa Sowerby 1805; *Eschara cervicornis*: Busk 1854.

Type locality: England. Distribution: Arctic-boreal, circumpolar; 6–280 m; common.

Porella concinna (Busk, 1854).

Lepralia concinna Busk 1854; *Smittina concinna*: Kluge 1975.

Type locality: Europe. Distribution: Arctic-boreal, circumpolar, including Arctic Alaska to San Pedro, California; littoral zone; uncommon.

Porella donoghueorum Dick, Grischenko and Mawatari, 2005.

Porella columbiana: Osburn 1952, Dick and Ross 1988, Soule et al. 1995, Grischenko 1997; non *Porella columbiana* O'Donoghue and O'Donoghue 1923, 1926 (as *Smittina columbiana*).

Type locality: Ketchikan, Alaska. Distribution: Kodiak, Alaska, to Redondo Beach and Santa Monica, California in the eastern Pacific; Commander Islands in the western Pacific; intertidal zone.

Porella groenlandica Norman, 1894.

Porella bella var. *groenlandica* Norman 1894; *Schizoporella bidenkapi*: Nordgaard 1906.

Type locality: Western Greenland. Distribution: Arctic, circumpolar, including Chukchi and northern Bering seas; 14–280 m.

Porella immersa Mawatari, 1956.

?*Porella kurilensis* Mawatari 1956, Dick and Ross 1986.

Type locality: Kuril Islands. Distribution: Kodiak Island, Alaska, and the Kuril Islands; littoral zone; common.

Porella laevis (Fleming, 1828).

Cellepora laevis Fleming 1828; *Porella laevis* forma *escharae* Smitt 1868.

Type locality: Great Britain. Distribution: Arctic-boreal, including Arctic Alaska; 54–753 m.

Porella minuta (Norman, 1868).

Porella minuta Hincks 1880, Norman 1930.

Type locality: Barents Sea. Distribution: Arctic-boreal circumpolar; 0–70 m.

Porella proboscidea Hincks, 1888.

Eschara verrucosa Ricnk 1877.

Type locality: Not traced. Distribution: Arctic circumpolar; depth unknown.

Porella tumida Kluge, 1955.

Type locality: Bering Strait. Distribution: Northern Bering Sea and Bering Strait; 40–50 m.

Family Hincksiporidae

Hincksipora spinulifera (Hincks, 1889).

Mucronella spinulifera Hincks 1889; *Monoporella spinulifera*: Hincks 1892; *Porellina ciliata* forma *dura* Smitt 1867; *Discopora cruenta*: Smitt 1871; *Lepralia cruenta*: Waters 1900; *Escharelloides spinulifera*: Kluge 1975.

Type locality: Gulf of St. Lawrence. Distribution: Arctic, Atlantic, including Point Barrow, Alaska; littoral zone.

Family Lepraliellidae

Lepraliella contigua (Smitt, 1868).

Cellepora ramulosa contigua Smitt 1868; *Rhamphostomella contigua*: Nordgaard 1905.

Type locality: Barents Sea. Distribution: Arctic, circumpolar; 10–162 m.

Lepraliella hippopus (Smitt, 1867).

Lepralia hippopus Smitt 1868; *Hippoponella hippopus*: Osburn 1933.

Type locality: Barents Sea. Distribution: Widespread boreal-Arctic; 14–235 m.

Family Romancheinidae

Arctonula arctica (M. Sars, 1851).

Lepralia arctica M. Sars 1851; *Discopora pavonella*: Smitt 1868; *Mucronella pavonella*: Hincks 1880; *Umbonula pavonella*: Harmer 1903; *Umbonula arctica*: Osburn 1952, Kluge 1975.

Type locality: Barents Sea. Distribution: Arctic-boreal, circumpolar, including Arctic Alaska to the Queen Charlotte and Vancouver islands; 1–345 m.

Escharella dijmphnae (Kluge, 1929).

Mucronella dijmphnae Kluge 1929; *Mucronella variolosa* Levinsen 1887; *Mucronella ventricosa* Kluge 1908 (in part).

Type locality: Siberian Sea. Distribution: Arctic circumpolar; 3–510 m.

Escharella immersa (Fleming, 1828).

Lepralia immersa Fleming 1828.

Type locality: Eastern North Atlantic. Distribution: Arctic-boreal, circumpolar; 0–540 m.

Escharella labiata (Boeck in Smitt, 1868).
Discopora coccinea forma *labiata* Smitt 1868; *Phylactella grandis* Hincks 1880; *Phylactella labiata*: Kluge 1975.
Type locality: Barents Sea. Distribution: Arctic circumpolar; 1–1000 m.

Escharella levinseni Hayward, 1994.
Type locality: Faroe Islands. Distribution: Boreal-Arctic circumpolar; collected in 13 m at Point Barrow, Alaska.

Escharella rugosa (Soule, Soule and Chaney, 1995).
Non *Lepralia ventricosa* Hassall 1842; non *Mucronella ventricosa*: Hincks 1880; ?*Mucronella ventricosa*: O'Donoghue and O'Donoghue 1923, 1926; *Mucronella ventricosa*: Osburn 1952 (in part); ?*Escharella ventricosa*: Kluge 1975 (in part?); *Haywardipora rugosa* Soule, Soule and Chaney 1995.
Type locality: Santa Cruz Island, California. Distribution: ?Arctic-boreal, circumpolar; Osburn (1952) listed it from Point Barrow, Alaska, and Puget Sound; 5–450 m.

Escharella rylandi (Soule, Soule, and Chaney, 1995).
Mucronella major: Osburn 1952 (in part); *Haywardipora rylandi* Soule, Soule, and Chaney 1995.
Type locality: Point Barrow, Alaska. Distribution: Point Barrow, Alaska, possibly to western Baja California; littoral zone.

Escharella ventricosa (Hassall, 1842).
Lepralia ventricosa Hassall 1842.
Type locality: Western North Europe. Distribution: Arctic-boreal, circumpolar; 5–450 m.

Hemicyclopora polita (Norman, 1864).
Lepralia polita Norman 1864; *Eschara moskensis* Nordgaard 1905.
Type locality: Norway. Distribution: Widespread boreal-Arctic; 2–400 m.

Ragionula rosacea (Busk, 1856).
Eschara rosacea Busk 1856; *Escharoides rosacea*: Smitt 1868, Hinks 1880; *Escharopsis rosacea*: Kluge 1975; *Discopora rosacea*: Nordgaard 1918.
Type locality: Not traced. Distribution: Widespread boreal-Arctic; 12–315 m.

Rhamphostomella bilaminata (Hincks, 1877).
Cellepora bilaminata Hincks 1877.
Type locality: Labrador. Distribution: Arctic, circumpolar; 5–226 m.

Rhamphostomella bilaminata sibirica Kluge, 1929.
Type locality: Siberian Sea. Distribution: Widespread in the Arctic and found in the northern Bering Sea; 3–170 m.

Rhamphostomella costata Lorenz, 1886. Ribbed bryozoan.
Type locality: Jan Mayen Island. Distribution: Arctic, circumpolar, including the Bering Sea; 2–308 m; uncommon.

Rhamphostomella hinksi Nordgaard, 1906.
Type locality: Archipelago of the Canadian Islands. Distribution: Pacific boreal-Arctic, circumpolar; 10–270 m.

Rhamphostomella ovata (Smitt, 1868).
Cellepora ovata Smitt 1868.
Type locality: Barents Sea. Distribution: Arctic, circumpolar; 3–144 m.

Rhamphostomella plicata (Smitt, 1868).
Cellepora plicata Smitt 1868.
Type locality: Barents Sea. Distribution: Arctic, circumpolar; 12–132 m.

Rhamphostomella scabra (O. Fabricius, 1780).
Cellepora scabra Smitt 1868.
Type locality: Greenland. Distribution: Widespread boreal-Arctic; 1–460 m.

Rhamphostomella spinigera Lorenz, 1886.
Type locality: Jan Mayen Island. Distribution: Arctic, circumpolar; 10–234 m.

Family Umbonulidae

Desmacystis sandalia (Roberston, 1900).
Membranipora sandalia Robertson 1900.
Type locality: Yakutat, Alaska. Distribution: Boreal Pacific; from Alaska to Queen Charlotte Islands; Kuril Islands; midlittoral and infralittoral zones.

Posterula sarsii (Smitt, 1868).
Escharoides sarsi Smitt 1868; *Escharopsis sarsi*: Kluge 1975.
Type locality: Barents Sea. Distribution: Primarily Arctic, circumpolar, including Point Barrow to Juneau, Alaska; 4–300 m; uncommon.

Umbonula patens (Smitt, 1868).
Eschara patens Smitt 1868; *Discopora patens*: Nordgaard 1918.
Type locality: Spitsbergen. Distribution: Arctic, including Point Barrow, Alaska; littoral zone; uncommon.

Superfamily Microporoidea

Family Aspidostomatidae

Euritina arctica Osburn, 1950.
Type locality: Point Barrow, Alaska. Distribution: Arctic, circumpolar; littoral zone.

Family Microporidae

Microporina articulata (O. Fabricius, 1821).
Cellularia articulata O. Fabricius 1821; *Salicornaria borealis* Busk 1855; *Cellaria borealis* (Busk 1855); *Microporina borealis* (Busk 1855).

Type locality: Western Greenland. Distribution: Arctic-boreal, including Bering Sea to British Columbia; littoral zone; common.

Family Monoporellidae

Monoporella aleutica Dick, 2008.

Type locality: Stalemate Bank, western Aleutian Islands. Distribution: Known only from type locality; 189 m; rare.

Monoporella ellefsoni Dick, 2008.

Type locality: Near Kiska Island, Aleutian Islands. Distribution: Western to central Aleutians; 93–355 m.

Remarks: This species co-occurs with *M. seastormi* and is found on dead shells of *Chlamys* sp. and rocks.

Monoporella elongata Dick, 2008.
?*Monoporella* species: Taylor and McKinney 2002; *Monoporella* sp. 2: Ostrovsky and Taylor 2005.

Type locality: Near Tanaga Island, Aleutian Islands. Distribution: Western and central Aleutians, near Kiska, Amchitka, and Tanaga islands; 81–94 m.

Monoporella flexibila Dick, 2008.

Type locality: Stalemate Bank, western Aleutian Islands. Distribution: Stalemate Bank and just west of Amchitka Island, Aleutian Islands; 181–227 m.

Remarks: This is the only species of *Monoporella* known to form flexible, erect branches.

Monoporella gigantea Dick, 2008.

Type locality: Near Buldir Island, Aleutian Islands. Distribution: Western Aleutian Islands; 93–227 m.

Monoporella seastormi Dick, 2008.

Type locality: Near Kiska Island, Aleutian Islands. Distribution: Western and central Aleutians; 95–355 m.

Remarks: This species co-occurs with *M. ellefsoni* and is found on dead shells of *Chlamys* sp.

Superfamily Schizoporelloidea

Family Cheiloporinidae

Cheilopora elfa Kuklinski, Grischenko, and Jewett, 2015.

Type locality: Amchitka Island, Rat Islands, Aleutian Islands, Alaska (51°24′31.5″N, 179°17′57.9″W). Distribution: Known only from the type locality; 12 m.

Cheilopora inermis (Busk, 1860).
Mucronella inermis Busk 1860.

Type locality: Shetland, Scotland. Distribution: Arctic, circumpolar, including the Chukchi and Bering seas; 11–323 m.

Cheilopora peristomata Kuklinski, Grischenko, and Jewett, 2015.

Type locality: Mid Boot Bay, Adak Island, Andreanof Islands, Aleutian Islands, Alaska (51°44′16.5″N, 176°30′00.3″W). Distribution: Known only from the type locality; 10 m.

Cheilopora praelucida (Hincks, 1888).
Mucronella praelucida Hincks 1888.

Type locality: Gulf of St. Lawrence. Distribution: Widespread in the Arctic; littoral zone.

Cheilopora sincera (Smitt, 1867).
Discopora sincera Smitt 1867; *Mucronella simplex* Hincks 1880; *Mucronella sincera*: Nordgaard 1896; *Eschara sincera*: Nordgaard 1905.

Type locality: Barents Sea. Distribution: Boreal-Arctic circumpolar; 1–408 m.

Family Cryptosulidae

?***Cryptosula pallasiana*** (Moll, 1803).
Eschara pallasiana Moll 1803; *Lepralia pallasiana*: O'Donoghue and O'Donoghue 1925.

Type locality: Unknown. Distribution: ?Alaska to Oaxaca, Mexico, and Chile; Nova Scotia to Florida; Norway to the Black and Red seas; intertidal zone to 60 m.

Remarks: Dick and Ross (1988) stated that specimens identified as *Cryptosula pallasiana* in Alaskan waters are *Cryptosula zavjalovensis* (= *okadai*).

Cryptosula zavjalovensis Kubanin, 1976.
Lepralia reticulata Okada 1929 (non *Lepralia reticulata* MacGillivray 1842); *Lepralia reticulata*: Androsova 1958; *Lepralia pallasiana*: O'Donoghue 1925; *Cryptosula pallasiana*: Dick and Ross 1986; *Cryptosula okadai* Dick and Ross 1988; *Cryptosula okadai*: Grischenko 1997.

Type locality: Sea of Okhotsk. Distribution: Boreal Pacific; Bering Sea to the Gulf of Alaska; Gulf of Anadyr, Commander Islands, Kamchatka, Sea of Okhotsk, and northern mainland of the Sea of Japan; intertidal zone to 40 m.

Harmeria scutulata (Busk, 1855).
Lepralia scutulata Busk 1855.

Type locality: Western Greenland. Distribution: Primarily Arctic, circumpolar; Bering Strait and Punuk Island, Bering Sea; to a depth of 48 m.

Family Lacernidae

Cylindroporella tubulosa (Norman, 1868).
Lepralia tubulosa Norman 1868.

Type locality: Shetland Isles, Scotland. Distribution:

Arctic-boreal, circumpolar; Arctic Alaska to British Columbia in the eastern North Pacific; littoral zone; common.

Family Microporellidae

Fenestrulina blaggae (Soule, Soule and Chaney, 1995).

Fenestruloides blaggae Soule, Soule and Chaney 1995.

Type locality: Carmel, California. Distribution: Southeastern Alaska to north-central California; littoral zone.

Fenestrulina delicia Winston, Hayward, and Craig, 2000.

Type locality: Western North Atlantic (Maine). Distribution: Northern Gulf of Alaska to San Francisco, California; Maine; littoral zone.

Fenestrulina malusii (Audouin, 1826).

Cellepora malusii Audouin 1826; *Microporella malusii*: Hincks 1880, Androsova 1958, Kluge 1975; ?*Microporella malusii* var. *glabra*: O'Donoghue and O'Donoghue 1923, 1926.

Type locality: Red Sea. Distribution: Cosmopolitan; amphi-boreal in the North Pacific; littoral zone; uncommon.

Fenestrulina porosa Canu and Bassler, 1923.

Microporella malusii var. *umbonata* O'Donoghue and O'Donoghue 1926; *Fenestrulina malusi* var. *umbonata*: Osburn 1952, McCain and Ross 1974; *Fenestrulina malusii*: Dick and Ross 1986 (in part).

Type locality: Santa Monica, California. Distribution: Kodiak, Alaska, to California; intertidal and shallow subtidal zones; uncommon.

Fenestrulina tongassorum (Dick, Grischenko, and Mawatari, 2005).

Fenestruloides tongassorum Dick, Grischenko and Mawatari 2005.

Type locality: Ketchikan, Alaska. Distribution: Known only from the type locality; intertidal zone.

Microporella alaskana Dick and Ross, 1988.

Microporella sp. A McCain and Ross 1974; *Microporella ciliata*: Dick and Ross 1986.

Type locality: East shore of Spruce Island near Kodiak Island, Alaska. Distribution: Kodiak Island to the Strait of Juan de Fuca, Washington; littoral zone; uncommon.

Microporella arctica Norman, 1903.

Type locality: Greenland. Distribution: Boreal-Arctic circumpolar; 25–75 m.

Microporella californica (Busk, 1856).

Lepralia californica Busk 1856; ?*Microporella ciliata* forma *californica*: Hincks 1883.

Type locality: California. Distribution: Southern Alaska to southern California; intertidal zone to 150 m.

Microporella ciliata (Pallas, 1766).

Eschara ciliata Pallas 1766; *Porina ciliata*: Smitt 1868; *Microporella impressa*: Andersson 1902.

Type locality: Europe. Distribution: Cosmopolitan; 0–126 m.

Microporella germana Dick and Ross, 1988.

?*Microporella ciliata*: Kluge 1975; *Microporella ciliata*: Dick and Ross 1986 (in part).

Type locality: North shore of Eider Island, Narrow Strait, near Kodiak, Alaska. Distribution: Bering Strait to the eastern Aleutian Islands; littoral zone; common.

Microporella ketchikanensis Dick, Grischenko, and Mawatari, 2005.

Type locality: Ketchikan, Alaska. Distribution: Known only from type locality; littoral zone; uncommon.

Microporella neocribroides Dick and Ross, 1988.

Microporella ciliata: Dick and Ross 1986.

Type locality: East shore of Termination Point near Kodiak, Alaska. Distribution: Western Gulf of Alaska; littoral zone; common.

Microporella setiformis O'Donoghue and O'Donoghue, 1923.

Type locality: Vancouver Island, British Columbia. Distribution: Ketchikan, Alaska, to the Channel Islands in southern California; littoral zone; uncommon.

Microporella speciosa Suwa, Dick, and Mawatari, 1998.

Type locality: Narrow Strait, Kodiak Island, Alaska. Distribution: Southern Bering Sea and the Gulf of Alaska; shallow subtidal zone.

Family Myriaporidae

Myriapora coarctata (M. Sars, 1863).

Leieschara coarctata M. Sars 1863; *Myriozoum coarctatum*: Smitt 1868; *Myriozoum subgracile*: O'Donoghue 1926.

Type locality: Northern Norway. Distribution: Arctic-boreal, including the western coast of North America from the Bering Sea to Oregon; 24–432 m.

Myriapora orientalis (Kluge, 1929). Eastern fork-branched bryozoan.

Myriozoum orientale Kluge 1929; *Myriapora subgracile*: Robertson 1908; *Leieschara orientalis* Kluge 1955, 1975.

Type locality: Chukchi Sea off Siberia. Distribution: Arctic-boreal, Pacific, including the Bering Strait and the western coast of North America; 7–53 m.

Myriapora subgracilis (d'Orbigny, 1853). Yellow staghorn bryozoan.

Myriozoum subgracile d'Orbigny 1853; *Leieschara subgracilis*: Norman 1876; *Myriozoum coarctatum*: O'Donoghue 1926.

Type locality: Newfoundland. Distribution: Arctic, circumpolar, including northern coast of North America and the Bering Sea; 1–520 m.

Myriozoella plana (Dawson, 1859).

Lepralia plana Dawson 1859; *Myriozoum crustaceum* Smitt 1868, Osburn 1919; *Myriozoella crustacea*: Osburn 1932; *Schizoporella crustacea*: Kluge 1975.

Type locality: Gulf of St. Lawrence, Canada (western North Atlantic). Distribution: Arctic-boreal, circumpolar, including the Bering Sea to Juneau, Alaska; littoral zone; common.

Family Pacificincolidae

Primavelans insculpta (Hincks, 1882). Fluted bryozoan.

Schizoporella insculpta Hincks 1882; *Hippodiplosia insculpta*: Osburn 1952 (in part), McCain and Ross 1974; *Hippoporina insculpta*: Soule et al. 1995; *Pacificincola insculpta*: Dick, Grischenko and Mawatari 2005.

Type locality: Queen Charlotte Islands, British Columbia. Distribution: Sitka, Alaska, to southern California; littoral zone; uncommon.

Family Schizoporellidae

Dakaria dawsoni (Hincks, 1883).

Schizoporella dawsoni Hincks 1883; *Schizoporella torquata*: Hincks 1884 (non *Escharina torquata* d'Orbigny).

Type locality: Dolomite Narrows, British Columbia. Distribution: Gulf of Alaska to Washington; littoral zone.

Schizoporella cornuta (Gabb and Horn, 1862).

Repteschareliina cornuta Gabb and Horn 1862; *Schizoporella biaperta*: Hincks 1883, Robertson 1908 (in part), O'Donoghue and O'Donoghue 1923; *Stephanosella biaperta*: Canu and Bassler 1923 (in part), O'Donoghue and O'Donoghue 1925, Hastings 1930.

Type locality: Santa Barbara, California. Distribution: Gulf of Alaska to Panama and the Galapagos Islands; shallow waters to depths greater than 200 m.

Schizoporella japonica Ortmann, 1890.

Schizoporella unicornis var. *japonica* Ortmann 1890; *Schizoporella unicornis*: Okada 1929, Powell 1970, McCain and Ross 1974, Ross and McCain 1976, Mawateri and Mawateri 1981, Kubota and Mawateri 1985, Liu et al. 2001, Osburn 1952 (in part?), ?Soule et al. 1995.

Type locality: Japan. Distribution: Sitka, Alaska, to San Francisco, California; Hokkaido Island, Japan to China; littoral zone.

Schizoporella obesa (Waters, 1900).

Porella obesa Waters 1900; *Hippodiplosia obesa*: Kluge 1975.

Type locality: Barents Sea. Distribution: Arctic-boreal; 24–450 m.

Family Stomachetosellidae

Lepralioides nordlandica (Nordgaard, 1905).

Eschara nordlandica Nordgaard 1905; *Discopora megastoma* Smitt 1872 (in part).

Type locality: Kvaenangen, Norway. Distribution: Boreal-Arctic, circumpolar; 27–178 m.

Pachyegis brunnea (Hincks, 1883).

Monoporella brunnea Hincks 1883.

Type locality: Queen Charlotte Islands, British Columbia. Distribution: Point Barrow, Alaska, to British Columbia; littoral zone.

Pachyegis groenlandica (Norman, 1894).

Porella bella var. *groenlandica* Norman 1894; *Schizoporella bidenkapi* Nordgaard 1906.

Type locality: Greenland. Distribution: Boreal-Arctic, circumpolar; 6–280 m.

Pachyegis princeps (Norman, 1903).

Porella princeps Norman 1903; *Monoporella spinulifera* var. *praeclara* Hincks 1892; *Discopora megastoma* Smitt 1872.

Type locality: Greenland. Distribution: Boreal-Arctic circumpolar; 14–145 m.

Stomachetosella condylata Soule, Soule and Chaney, 1995.

Non *Lepralia sinuosa* Busk 1860; ?*Schizoporella sinuosa* Hincks 1884, O'Donoghue and O'Donoghue 1923; ?*Stomachetosella sinuosa*: O'Donoghue and O'Donoghue 1925, Osburn 1952 (in part?); ?*Stomachetosella sienna* Dick and Ross 1988.

Type locality: Middle Bank, Puget Sound. Distribution: Point Barrow, Alaska, to the Santa Barbara Channel, California; shallow water to 126 m.

Stomachetosella cruenta (Busk, 1854).

Lepralia violacea var. *cruenta* Busk 1854.

Type locality: Great Britain. Distribution: Arctic-boreal, circumpolar, including Arctic Alaska to Puget Sound, Washington; littoral zone; uncommon.

Stomachetosella hincksi Powell, 1968.

Type locality: Western North Atlantic (Arctic Canada). Distribution: Arctic Alaska and Arctic Canada; littoral zone.

Stomachetosella limbata (Lorenz, 1886).

Schizoporella limbata Lorenz 1886.

Type locality: Yan-Maien Island. Distribution: Pacific boreal-Arctic, circumpolar; 20–315 m.

Stomachetosella sienna Dick and Ross, 1988.

Type locality: East of Cape Barnabas, Kodiak Island, Alaska. Distribution: Gulf of Alaska to the eastern Aleutians; littoral zone; uncommon.

Stomachetosella sinuosa (Busk, 1860).

Lepralia sinuosa Busk 1860.

Type locality: Great Britain. Distribution: Arctic-boreal, circumpolar, including Arctic Alaska to Puget Sound, Washington; littoral zone; uncommon.

Family Teuchoporidae

Lagenicella neosocialis Dick and Ross, 1988.

Non *Lagenipora socialis* Hincks 1877; *Lagenipora socialis*: O'Donoghue and O'Donoghue 1923, 1926, Osburn 1952, Soule 1961, Dick and Ross 1986.

Type locality: Neva Cove, Kodiak Island, west end of Narrow Strait, Alaska. Distribution: Southern Alaska to southern California; littoral zone.

Lagenicella spinulosa (Hincks, 1884).

Lagenipora spinulosa Hincks 1884; ?*Lagenipora spinulosa*: Robertson 1908, Canu and Bassler 1923, J. D. Soule 1961.

Type locality: Queen Charlotte Islands, British Columbia. Distribution: Alaska to Baja California; ?Galapagos Islands; intertidal zone to 126 m.

Superfamily Smittinoidea

Family Bitectiporidae

Hippoporina apertura (Osburn, 1952).

Dakaria apertura Osburn 1952; *Dakaria* sp. A Dick and Ross 1986.

Type locality: Tomales Bay, California. Distribution: Boreal eastern North Pacific (southern Alaska to California); littoral zone.

Hippoporina cancellata (Smitt, 1868).

Escharella porifera forma *cancellata* Smitt 1868; *Escharelloides cancellatum* (Smitt 1868).

Type locality: Spitsbergen. Distribution: Euro-American Arctic; depth unknown.

Hippoporina harmsworthi (Waters, 1900).

Schizoporella harmsworthi Waters 1900; *Hippodiplosia harmsworthi* (Waters 1900); *Escharella Legentilii* forma *protopya* Smitt 1868; *Schizoporella cincta* var. Hincks 1892.

Type locality: Barents Sea. Distribution: Boreal-Arctic, circumpolar; 50–200 m.

Hippoporina insculpta (Hincks, 1882).

Schizoporella insculpta Hincks 1882; *Hippodiplosia insculpta*: Osburn 1952 (in part), Soule and Duff 1957.

Type locality: Virago Sound or Cumshewa Harbor, Queen Charlotte Islands, British Columbia. Distribution: Sitka, Alaska, to California; shallow waters to 240 m.

Hippoporina murdochi (Kluge, 1962).

Hippodiplosia murdochi Kluge 1962.

Type locality: Chukchi Sea, northwestern coast of Alaska. Distribution: Pacific boreal; 13–49 m.

Hippoporina pertusa (Esper, 1796).

Lepralia pertusa Busk 1854; *Hippodiplosia pertusa* (Esper 1796).

Type locality: Not traced. Distribution: Widespread boreal-Arctic; 2–180 m.

Hippoporina reticulatopunctata (Hincks, 1877).

Lepralia reticulato-punctata Hincks 1877; *Hippodiplosia reticulatopunctata*: Osburn 1933.

Type locality: Western Greenland. Distribution: Arctic, circumpolar; 9–306 m.

Hippoporina vulgaris Dick and Ross, 1988.

Dakaria dawsoni: Dick and Ross 1986.

Type locality: Sunny Cove, south shore of Spruce Island near Kodiak, Alaska. Distribution: Gulf of Alaska; Commander Islands; littoral zone; common.

Metroperiella argentea (Hincks, 1884).

Porella argentea Hincks 1884; *Hippodiplosia* sp. Dick and Ross 1986; *Codonellina argentea*: Dick and Ross 1988 *et. auctt.*

Type locality: Queen Charlotte Islands, British Columbia. Distribution: Boreal eastern North Pacific (southern Alaska to British Columbia); to a depth of 20 m; uncommon.

Schizomavella auriculata lineata (Nordgaard, 1896).

Smittia lineata Nordgaard 1896; *Schizoporella lineata*: Nordgaard 1905, *et auctt.; Escharella auriculata*: Smitt 1868; *Schizoporella auriculata*: Osburn 1912.

Type locality: Barents Sea. Distribution: Widely distributed in the Arctic and Bering Sea; 5–198 m.

Schizomavella porifera (Smitt, 1868).

Escharella porifera forma *typica* Smitt 1868; *Codonellina operculata* Mawatari 1956; *Schizoporella porifera*: Kluge 1975.

Type locality: Scandinavia. Distribution: Circumpolar, primarily Arctic, recorded at Point Barrow, Alaska; littoral zone.

Family Smittinidae

Dengordonia uniporosa Soule, Soule, and Chaney, 1995.

Non *Lepralia bella* Busk 1860; ?*Smittina bella*: Osburn 1923 (list), Dick and Ross 1988; *Smittina bella*: Osburn 1952 (in part); ?*Prenantia bella*: Hayward and Ryland 1979.

Type locality: Santa Cruz Island, California. Distribution: ?Arctic to southern California; intertidal zone to 126 m.

Parasmittina alaskensis Osburn, 1952.

Type locality: Point Barrow, Alaska. Distribution: Known only from type locality; 45 m; rare.

Parasmittina aleutensis Soule and Soule, 2002.

Parasmittina trispinosa: Osburn 1952 (in part), Dick and Ross 1988.

Type locality: Canoe Bay, eastern Aleutian Islands. Distribution: Aleutian Islands; infralittoral zone to a depth of 185 m.

Parasmittina jeffreysi (Norman, 1876).

Escharella Jacotini forma *lamellosa* Smitt 1868; *Smittina jeffreysi* Norman 1903; *Smittina trispinosa*: Whiteaves 1901 (in part).

Type locality: Greenland. Distribution: Widespread boreal-Arctic; 5–400 m.

?***Parasmittina trispinosa*** (Johnston, 1838).

Discopora trispinosa Johnston 1838; *Smittina trispinosa*: Hincks 1880, Kluge 1975.

Type locality: Great Britain. Distribution: Arctic-boreal, circumpolar, including Arctic Alaska to southern Alaska; records as far south as the Galapagos Islands need to be reexamined; littoral zone; common.

Remarks: Soule and Soule (2002) note that the "true" *P. trispinosa* is probably restricted to an Atlantic-boreal and perhaps Arctic distribution, and that *P. trispinosa sensu lato* represents a species complex.

Phylactella pacifica O'Donoghue, 1923.

Type locality: Vancouver Island, British Columbia. Distribution: Boreal, Pacific, from the Bering Strait to British Columbia; Okhotsk Sea; 0–54 m.

Raymondcia macginitiei Soule, Soule, and Chaney, 1995.

Non *Lepralia bella* Busk 1860; *Smittina bella*: Osburn 1952 (in part).

Type locality: Point Barrow, Alaska. Distribution: ?Circumpolar; 24–67 m

Raymondcia rigida (Lorenz, 1886).

Smittina rigida Lorenz 1886, *Escharella landsborovii*: Smitt 1868 (in part); *Smittina landsborovii*: Johnston in Waters 1900; *Smittina novanglia* Osburn 1933.

Type locality: Jan Mayen Island (Norway). Distribution: Arctic, circumpolar, including the Chukchi Sea and Bering Strait; 0–250 m.

Smittina altirostris Osburn, 1952.

Type locality: Nunivak Island, Alaska. Distribution: Known only from type locality; 15–20 m; rare.

Smittina bella (Busk, 1860).

Lepralia bella Busk 1860; ?*Prenantia bella*: Hayward and Ryland 1979; *Smittina rigida*: Androsova 1958, Kluge 1975; *Smittina* sp. Dick and Ross 1986.

Type locality: Greenland. Distribution: Arctic-boreal, circumpolar, including Arctic Alaska to southern Alaska; littoral zone; uncommon.

Smittina beringia Kluge, 1952.

Type locality: Bering Strait. Distribution: Bering Strait and northern Bering Sea; 31–57 m.

Smittina landsborovii (Johnston, 1847).

Lepralia landsborovi Johnston 1847; *Escharella landsborovii*: Smitt 1867; *Smittia landsborovii*: Hincks 1880.

Type locality: Great Britain. Distribution: Cosmopolitan, including Alaska to South America; littoral zone.

Smittina majuscula (Smitt, 1868).

Escharella porifera var. *majuscula* Smitt 1868; *Smittina arctica*: Osburn 1952 (in part); *Smittina landsborovi*: Dick and Ross 1986.

Type locality: Barents Sea. Distribution: Arctic-boreal, circumpolar, including Arctic Alaska to Narrow Strait, off Kodiak Island in the Gulf of Alaska; 11–310 m.

Smittina minuscula (Smitt, 1868).

Escharella porifera forma *minuscula* Smitt 1868; *Smittina arctica*: Norman 1894 (in part).

Type locality: Barents Sea. Distribution: Arctic, circumpolar; 6–288 m.

Smittina mucronata (Smitt, 1868).

Escharella landsborovii forma *mucronata* Smitt 1868; *Porella mucronata*: Kluge 1906.

Type locality: Barents Sea. Distribution: Widely distributed in the Arctic, including the Chukchi Sea and Bering Strait; 9–252 m.

Smittina retifrons Osburn, 1952.

Type locality: Leonard Harbor, Alaska. Distribution: Also known to occur at Canoe Bay, Alaska; littoral zone.

Smittina tuberosa Kluge, 1952.

Type locality: Chukchi Sea, northwestern coast of Alaska. Distribution: American Arctic; 50–70 m.

Smittoidea propinqua (Smitt, 1868).

Eschara verrucosa forma *propinqua* Smitt 1868; *Lepralia propinqua*: Hincks 1877; *Porella propinqua* : Nordgaard 1905; *Hippodiplosia propinqua*: Kluge 1975.

Type locality: Barents Sea. Distribution: Widespread boreal-Arctic; 1–210 m.

Suborder Scrupariina

Superfamily Scruparioidea

Family Eucrateidae

Eucratea loricata (Linnaeus, 1758).

Sertularia loricata Linnaeus 1758; *Gemellaria loricata* (Linnaeus 1758); *Gemicellaria loriculata* (Linnaeus 1758).

Type locality: Europe. Distribution: Arctic-boreal, widely distributed in the Northern Hemisphere; 0–2300 m, mostly from 0–75 m.

Phylum Chaetognatha—The Arrow Worms

The chaetognaths are popularly known as the "arrowworms" and form an important group of carnivorous planktonic organisms. They play a vital role in the food chain and are used in oceanography as indicators of watermasses. More than 120 species are extant (Appeltans et al., 2012), with approximately five species occurring in Alaskan waters (Table 1). The higher classification follows the Chaetognatha of the World website (Pierrot-Bults, 2004).

Class Sagittoidea

Order Phragmophora

Family Eukrohniidae

Eukrohnia bathypelagica Alvarino, 1962.

Type locality: California. Distribution: Circumpolar, including the Bering Sea; deep-mesopelagic to bathypelagic, found below 350 m in the North Pacific.

Eukrohnia hamata (Möbius, 1875).

Krohnia hamata Möbius 1875; *Eukrohnia borealis* Moltschanoff 1907.

Type locality: Eastern North Pacific. Distribution: Cosmopolitan; deep-mesopelagic to bathypelagic.

Order Aphragmophora

Family Sagittidae

Parasagitta elegans (Verrill, 1873).

Sagitta elegans Verrill 1873; *Sagitta elegans arctica* Aurivillius 1873; *Sagitta elegans baltica* Ritter-Zahony 1911.

Type locality: Vineyard Sound. Distribution: Circumpolar; subarctic; distant neritic, epipelagic; common.

Pseudosagitta scrippsae (Alvarino, 1962).

Sagitta scrippsae Alvarino 1962; *Flaccisagitta scrippsae* (Alvarino 1962).

Type locality: North Pacific transitional waters. Distribution: North Pacific transitional waters; shallow-mesopelagic.

Sagitta zetesios Fowler, 1905.

Solidosagitta zetesios (Fowler 1905).

Type locality: Bay of Biscay. Distribution: Cosmopolitan between 60°N and 60°S; deep-mesopelagic.

Phylum Echinodermata

Class Crinoidea—The Sea Lilies and Feather Stars

The crinoids (sea lilies and feather stars) are an ancient group of echinoderms, first appearing in the Cambrian Period and reaching their peak of abundance in the Mississippian Period, 350 mya. About 600 species are extant worldwide (Kellogg and Fautin, 2001), with approximately seven species occurring in Alaskan waters (Table 1). Major publications used to compile information for the list of crinoids included Clark and Clark (1967), Lambert and Austin (2007), and Roux and Lambert (2011).

Order Hyocrinida

Family Hyocrinidae

?***Ptilocrinus pinnatus*** A. H. Clark, 1907. Yellow sea lilly.

Type locality: British Columbia. Distribution: North Pacific, from ?Gulf of Alaska to British Columbia; northeastern Japan; 2540–2906 m; rare.

Order Comatulida

Family Antedonidae

Florometra asperrima (A. H. Clark, 1907). Common northern feather star.

Antedon asperrima A. H. Clark 1907; *Antedon rathbuni* A. H. Clark 1907; *Antedon inexpectata* A. H. Clark 1907; *Heliometra asperrima*: A. H. Clark 1907; *Heliometra inexpectata*: A. H. Clark 1907; *Heliometra rathbuni*: A. H. Clark 1907; *Heliometra glacialis biarticulata* A. H. Clark 1908; *Heliometra glacialis* var. *biarticulata* A. H. Clark 1909; *Heliometra biarticulata*: A. H. Clark 1913, 1915; *Florometra inexpectata*: A. H. Clark 1915; *Florometra rathbuni*: A. H. Clark 1915; *Heliometra eschrichtii* var. *biarticulata*: Von Hofsten 1915; *Florometra asperrima* var. *rathbuni*: A. H. Clark 1937.

Type locality: North of Unalaska, Alaska. Distribution: Bering Sea to Monterey Bay, California; Okhotsk Sea to Tsugaru Strait, Japan; 79–1574 m; common.

Florometra serratissima (A. H. Clark, 1907).

Antedon serratissima A. H. Clark 1907; *Antedon perplexa* A. H. Clark 1907; *Heliometra perplexa:* Clark 1907; *Heliometra serratissima*: Clark 1907; *Heliometra tanneri* Clark 1908 (non Hartlaub 1895); *Florometra asperrima* F. W. Clarke and Wheeler 1914 (non A. H. Clark 1907); *Florometra tanneri*: A. H. Clark 1915; *Promachocrinus (Florometra) perplexa*: A. H. Clark 1915; *Promachocrinus (Florometra) serratissima*: A. H. Clark 1915; *Florometra perplexa*: A. H. Clark 1921.

Type locality: Northeast of Port Angeles, Washington. Distribution: Shumagin Islands and Sanak Island, Alaska, to Natividad Island, Baja California, Mexico; 11–1252 m.

?***Heliometra glacialis*** (Owen, 1833).

Alecto glacialis Leach *in* Owen 1830; *Alecto eschrichtii* J. Müller 1841; *Antedon quadrata* P. H. Carpenter 1884; *Heliometra glacialis glacialis*: Clark and Clark 1967.

Type locality: Northwest of Spitsbergen. Distribution: Off Siberia near the Bering Strait and from the Okhotsk Sea to the Korean Strait; Greenland; Jan Mayen; Iceland; Faroes area; Norwegian coast around Finnmark; Cape Cod, Massachusetts, north to Labrador, Hudson Bay; 14–1358 m.

Psathyrometra fragilis (A. H. Clark, 1907). Fragile feather star.

Antedon fragilis A. H. Clark 1907; *Psathyrometra borealis* A. H. Clark 1908; *Psathyrometra profundorum* A. H. Clark 1908; *Psathyrometra* sp. A. H. Clark 1915; *Psathyrometra alascana*: A. H. Clark 1918; *Psathyrometra borealis*: Tortonese 1933; *Antedon (Psathyrometra) fragilis*: A. H. Clark 1937.

Type locality: Nemuro Strait, Hokkaido Island, Japan. Distribution: Western Aleutian Islands and southern

Alaska to Monterey Bay, California; Gulf of Panama; Japan; 439–2903 m.

Retiometra alascana A. H. Clark, 1936. Alaskan feather star.

Type locality: North of Unalaska, Alaska. Distribution: Southeastern Bering Sea and the Gulf of Alaska; Oregon; California; 200–1270 m.

Thaumatometra brevicirra (A. H. Clark, 1908).

Bathymetra brevicirra A. H. Clark 1908.

Type locality: Koniuji Island, central Aleutian Islands. Distribution: Known only from type locality; 3229 m; rare.

Class Asteroidea—The Sea Stars

There are about 2100 extant asteroid species worldwide (Pawson, 2007). The sea stars are a diverse group in Alaskan waters, with approximately 136 species (Table 1). Species complexes in several genera such as *Hippasteria* and *Leptasterias* show weakly defined species boundaries and are being resolved with molecular data (Mah[19]). Species in the genus *Henricia* are notoriously difficult to identify. Higher classification follows the World Asteroidea Database (Mah, 2009) and Mah and Foltz (2011).

Sources of primary and secondary literature used to compile the information for the list of asteroids were Fisher (1911, 1928, 1930), Verrill (1914), Djakonov (1950), Clark (1989, 1993, 1996), Lambert (2000), Clark and Jewett (2010, 2011a, b), Eernisse et al. (2010), Mah et al. (2010), Lambert and Boutillier (2011), Foltz et al. (2013), Mah and Foltz (2014), and Mah et al. (2014).

Order Paxillosida

Family Luidiidae

Luidia foliolata (Grube,1866). Sand star.

Petalaster foliolata Grube 1866; *Luidia foliata* Sladen 1889.

Type locality: Not stated. Distribution: Cook Inlet, Alaska, to Nicaragua; 4–346 m; common.

Family Astropectinidae

Dipsacaster anoplus Fisher, 1910.

Type locality: Cascade Head, Oregon. Distribution: Bering and Okhotsk seas; West coast of U.S.; 146–2200 m.

Dipsacaster borealis Fisher, 1910. Northern sand star.

Type locality: North of Unalaska Island, Alaska, Bering Sea. Distribution: Bering Sea and south of the Aleutian Islands to British Columbia; 201–1195 m; common in the Gulf of Alaska.

Dipsacaster eximius Fisher, 1905. Extraordinary sand star.

Type locality: Los Coronados Islands, southwest of San Diego, California. Distribution: Southeast Alaska to California; 600–1000 m.

Dipsacaster laetmophilus Fisher, 1910.

Type locality: South of Alaska Peninsula between Unalaska Island and Kodiak Island. Distribution: Alaska Peninsula to Vancouver Island, British Columbia; 1270–1903 m.

Leptychaster anomalus Fisher, 1906. Pentagonal sand star.

Glyphaster anomalus Verrill 1909.

Type locality: Unalaska, Alaska. Distribution: Alaska, Bering Sea, to Sea of Japan, ?California; 58–1400 m; uncommon.

Leptychaster arcticus (M. Sars, 1851). Arctic sand star.

Astropecten arcticus M. Sars 1851, Danielssen and Koren 1884; *Archaster arcticus* Verrill 1873; *Leptoptychaster arcticus* Sladen 1889.

Type locality: Öxfjord, Finnmark. Distribution: Circumpolar north boreal, south to Delaware in western Atlantic and Norwegian Sea in the eastern Atlantic; 36–1262 m.

Leptychaster pacificus Fisher, 1906. Pacific sand star.

Leptychaster millespina Verrill 1909.

Type locality: Near the north end of Vancouver Island. Distribution: Southern Bering Sea to Vancouver, British Columbia; 10–435 m.

Leptychaster propinquus Fisher, 1910. Commander Island sand star.

Type locality: Commander Islands, Bering Sea. Distribution: Bering Sea; Attu Island, Aleutian Islands; 92–670 m.

Psilaster pectinatus (Fisher, 1905).

Bathybiaster pectinatus Fisher 1905; *Plutonaster abyssicola* Ludwig 1905.

Type locality: Southeast of San Clemente Island, California. Distribution: Bering Sea to Panama; 1500–3000 m.

Family Benthopectinidae

Benthopecten claviger claviger Fisher, 1910.

Type locality: Cape Blanco, Oregon. Distribution: Southern Bering Sea to Oregon; 1646–1946 m.

Remarks: Clark (1989) designated this subspecies to differentiate it from *B. claviger occidentalis* Baranova, 1955.

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[19] Mah, C. L. 2012. Personal commun. Smithsonian National Museum of Natural History, Department of Invertebrate Zoology, Washington, DC 20013.

Benthopecten mutabilis Fisher, 1910.

Type locality: Prince of Wales Island, Alaska. Distribution: Known only from type locality; 2869 m; rare.

Remarks: This species may be "a variant of the more common *Benthopecten claviger claviger*" (Lambert and Boutillier, 2011:87).

Cheiraster dawsoni (Verrill, 1880). Fragile star.

Archaster dawsoni Verrill 1880; *Acantharchaster dawsoni* Verrill 1894; *Luidiaster dawsoni* Ludwig 1910.

Type locality: Queen Charlotte Islands, British Columbia. Distribution: Bering Sea (Pribilof, Aleutian, and Commander Islands), south along the coast of Alaska to Queen Charlotte Islands, British Columbia; 102–291 m; common.

Nearchaster aciculosus (Fisher, 1910).

Acantharchaster aciculosus Fisher 1910; ?*Saraster insignis* A. H. Clark 1916.

Type locality: Between San Diego and San Clemente Island, California. Distribution: South of the Alaska Peninsula to northern Baja California; 84–1490 m; common.

Nearchaster pedicellaris (Fisher, 1910).

Acantharchaster variabilis pedicellaris Fisher 1910.

Type locality: South of Unimak Island, Aleutian Islands. Distribution: Aleutian Islands to California; type material collected at 512 m; common.

Nearchaster variabilis (Fisher, 1910).

Acantharchaster variabilis Fisher 1910.

Type locality: North of Unalaska, Aleutian Islands. Distribution: Southern Bering Sea to Strait of Juan de Fuca; 198–1061 m; common.

Family Ctenodiscidae

Ctenodiscus crispatus (Retzius, 1805). Mud star.

Asterias crispata Retzius 1805; *Asterias polaris* Sabine 1824; *Asterias arancia* Dewhurst 1834; *Astropecten corniculatus* Gray 1840; *Ctenodiscus pygmaeus* Müller and Troschel 1842; *Ctenodiscus krausei* Ludwig 1886; *Ctenodiscus procurator* Sladen 1889.

Type locality: Indian Ocean. Distribution: Circumpolar; to New England on the Atlantic coast, and to Panama and Japan in the Pacific; Europe; 10–1890 m; common.

Family Porcellanasteridae

Eremicaster crassus (Sladen, 1883).

Porcellanaster crassus Sladen 1883; *Porcellanaster gracilis* Sladen 1883; *Porcellanaster waltherii* Ludwig 1905; *Eremicaster tenebrarius* Fisher 1905.

Type locality: Mid-South Pacific. Distribution: Bering Sea to Peru and Chile; Galapagos Islands; mid-South Pacific; Southwest Atlantic (Uruguay); Southern Ocean (South Sandwich Islands); Indian Ocean; 1570–6330 m; there is a report of it occurring from only 101 m off the South Sandwich Islands.

Eremicaster pacificus (Ludwig, 1905).

Porcellanaster pacificus Ludwig 1905.

Type locality: Gulf of Panama. Distribution: Bering Sea (south of Pribilof Islands) to Gulf of Panama and the vicinity of the Galapagos Islands; Antarctic Ocean; 1570–4090 m.

Family Pseudarchasteridae

Gephyreaster swifti (Fisher, 1905). Swift's star or gunpowder star.

Mimaster swifti Fisher 1905.

Type locality: Stephen's Passage, Alaska. Distribution: Bering Sea and Aleutian Islands to Washington; 11–346 m; common.

Pseudarchaster alascensis Fisher, 1905. Alaskan scarlet star.

Pseudarchaster parelii alascensis Fisher 1911.

Type locality: Near Yes Bay, Behm Canal, Alaska. Distribution: Alaska to Oregon, Bering Sea; 269–375 m; common.

Pseudarchaster dissonus Fisher, 1910.

Type locality: Oregon. Distribution: Bering Sea to Oregon; 846–2300 m; common.

Pseudarchaster parelii (Düben and Koren, 1846). Northern scarlet star.

Astropecten parelii Düben and Koren 1846; *Archaster parelii* Sars 1861; *Archaster parelii*, var. *longobrachialis* Danielssen and Koren 1877; *Plutonaster (Tethyaster) parelii* Sladen 1889; *Pseudarchaster intermedius* Sladen 1889; *Astrogonium annectens* Perrier 1894; *Astrogonium hystrix* Perrier 1894; *Pseudarchaster intermedius*, var. *insignis* Verrill 1895; *Pseudarchaster tessellatus*, var. *arcticus* 1895; *Pseudarchaster granuliferus* Verrill 1899; *Astrogonium parelii* Koehler 1907; *Astrogonium parelii*, var. *longobrachiale* Koehler 1909; *Tethyaster parelii* Sussbach and Breckner 1911.

Type locality: Norway. Distribution: Circumboreal; in the North Atlantic along the European coast along the shores of Norway from Kristiansand to Finnmark, in the southwestern portion of the Barents Sea, off the north and east coasts of Ireland; along the American coast from 60°N south to 38°N.; in the North Pacific in the Sea of Japan, Sea of Okhotsk, Bering Sea (near the Commander Islands, along the northern shores of the Aleutians, near the Pribilof Islands, and along the American coast to Kodiak Island, Alaska); 15–2500 m; common.

Order Valvatida

Family Asterinidae

Patiria miniata Verrill, 1913. Bat star.

Asterina miniata (Brandt 1835).

Type locality: Sitka, Alaska. Distribution: Sitka, Alaska, to San Diego, California; low tidal zone to 302 m; common.

Family Goniasteridae

Ceramaster arcticus (Verrill, 1909). Arctic cookie star.

Tosia arctica Verrill 1909; *Tosiaster arcticus* Verrill 1914.

Type locality: Bering Island. Distribution: Bering Island along the Aleutian Islands to Strait of Juan de Fuca; intertidal zone to 186 m; uncommon.

Ceramaster clarki Fisher, 1910.

Type locality: Bowers Bank, Bering Sea. Distribution: Southern Bering Sea to southern California; 611–1100 m; uncommon.

Ceramaster japonicus (Sladen, 1889). Red cookie star.

Pentagomaster japonicus Sladen 1889; *Mediaster japonicus* Verrill 1899.

Type locality: Yokohama, Japan. Distribution: Northern Sea of Japan to Bering Sea, Aleutian Islands, and southeast along the American coast to Oregon; 194–1438 m; common.

Ceramaster leptoceramus (Fisher, 1905).

Tosia leptocerama Fisher 1905.

Type locality: Point Loma, near San Diego, California. Distribution: NOAA's AFSC RACE groundfish survey cruises (NMFS, AFSC, RACE survey database, 2012) has records of this species in the Bering Sea and Gulf of Alaska, and the Smithsonian Natural History Museum (USNM) database (http://collections.nmnh.si.edu/search/iz/) has a record off the Pribilof Islands; 395–1167 m (Fisher, 1905).

Ceramaster patagonicus (Sladen, 1889). Orange cookie star.

Pentagonaster patagonicus Sladen 1889; *Pentagonaster austrogranularis* Perrier 1891; *Mediaster patagonicus* Verrill 1899; *Ceramaster chondriscus* H. L. Clark 1923.

Type locality: Magellan Strait, near Patagonia. Distribution: Bering Sea and Aleutian Islands to Cape Horn, South America; 10–245 m; common.

Remarks: Several subspecies of this species have been described: *C. patagonicus grenadensis* (Clark and Downey, 1992) from the Atlantic; *C. patagonicus euryplax* (Clark, 1923) from the west and south coasts of South Africa; *C. patagonicus productus* (Djakonov, 1950) from the Okhotsk Sea; *C. patagonicus fisheri* (Bernasconi, 1963) and *C. patagonicus patagonicus* (Sladen, 1889) from the Bering Sea to South America. The status of this species complex remains unresolved and could benefit from a molecular study.

Ceramaster stellatus Djakonov, 1950. Stellate cookie star.

Type locality: Sea of Okhotsk. Distribution: Bering Sea and the Aleutian Islands; 110–500 m; uncommon.

Cladaster validus Fisher, 1910. Grainy white cookie star.

Type locality: Amukta Pass, Aleutian Islands. Distribution: Aleutian Islands to Queen Charlotte Sound; 116–621 m; uncommon.

Hippasteria californica Fisher, 1905.

Hippasteria californica H. L. Clark 1913, Alton 1966, Lambert 1978, Maluf 1988, Mah et al. 2010, Clark and Jewett 2011, Mah et al. 2014.

Type locality: Santa Cruz Island, California. Distribution: Aleutian Islands to Patton Seamount, Gulf of Alaska; Hokkaido, Japan; Washington to Baja California; 110–2373 m.

Hippasteria heathi Fisher, 1905. Heath's spiny star.

Hippasteria heathi: Clark 1993, Krieger and Wing 2002, Mah et al. 2010, Clark and Jewett 2011, Mah et al. 2014.

Type locality: Clarence Strait, Alaska. Distribution: Aleutian Islands and the Gulf of Alaska; 214–454 m; uncommon.

Hippasteria lepidonotus (Fisher, 1905).

Cryptopeltaster lepidonotus Fisher 1905, Lambert 1978, Maluf 1988, A. M. Clark 1993, Mah et al. 2010, Hendrickx et al. 2011, Mah et al. 2014; *Hippasteria pacifica* Ludwig 1905; *Cryptopeltaster philippii* Codoceo and Andrade 1981; *Cryptopeltaster* cf. *lepidonotus*: Pawson and Ahearn 2001.

Type locality: Santa Cruz Island, California. Distribution: Aleutian Islands to California; Chile; Galapagos Islands; 188–1244 m; rare.

Hippasteria phrygiana (Parelius, 1768).

Asterias equestris Linnaeus 1758; *Goniaster equestris* (Linnaeus 1758); *Asterias phrygiana* Parelius 1768; *Asterias johnstoni* Gray in Johnston 1836; *Hippasteria johnstoni* (Gray 1836); *Astrogonium phrygianum*: Müller and Troschel 1842; *Astrogonium aculeatum* Barrett 1857; *Goniaster phrygianus*: Norman 1865; *Hippasteria hyadesi* Perrier 1891; *Hippasteria spinosa* Verrill 1909; *Hippasteria kurilensis* Fisher 1911; *Hippasteria insignis* Dons 1938; *Hippasteria colossa* Djakanov 1950; *Hippasteria trojana* Fell 1958; *Hippasteria aleutica* Clark and Jewett 2011, *Hippasteria phrygiana*: Mah et al. 2014 (with a complete synonymy).

Type locality: Unknown. Distribution: Nearly worldwide; to depths exceeding 200 m.

Mediaster aequalis Stimpson, 1857. Vermilion star.

Ophidiaster aequalis Dujardin and Hupe 1862.

Type locality: Puget Sound, Washington, or San Francisco, California. Distribution: Chignik Bay, Alaska Peninsula, to southern California; intertidal zone to 293 m; common.

Mediaster tenellus Fisher, 1905.

Type locality: Santa Cruz Island, California. Distribution: Southeast Alaska to southern California; 532–2125 m; uncommon.

Family Asteropseidae

Dermasterias imbricata (Grube, 1857). Leather star.

Asteropsis imbricata Grube 1857; *Dermasterias inermis* Perrier 1875.

Type locality: Sitka, Alaska. Distribution: Sitka to Monterey Bay, California; intertidal to shallow subtidal zone; common.

Family Poraniidae

?Poraniomorpha hispida (M. Sars, 1872).

Goniaster hispidus M. Sars in G. O. Sars 1872; *Asterina borealis* Verrill 1878; *Porania spinulosa* Verrill 1880; *Porania borealis*: Verrill 1882; *?Rhegaster murrayi* Sladen 1883; *Pentagonaster hispidus*: Danielssen and Koren 1884, Grieg 1895, 1898; *Poraniomorpha spinulosa*: Verrill 1885, 1895; *Poraniomorpha borealis*: Verrill 1885, 1895, A. H. Clark 1949; *Lasiaster hispidus*: Sladen 1889, Norman 1893, Pfeffer 1894, Verrill 1899, Ludwig 1900, Grieg 1902, Michailouskij 1903, Süssbach and Breckner 1911.

Type locality: Skraaven, Lofoten Islands, Northern Norway. Distribution: Arctic to Cape Cod in the western Atlantic and via the Norwegian fjords to Bohuslan, western Sweden in the eastern Atlantic; 100–350 m.

Remarks: A species of *Poraniomorpha* has been collected from the western Beaufort Sea (Clark^4) and tentatively assigned to *P. hispida*. This species is likely to be *P. tumida* (Mah and Foltz, 2014).

Poraniomorpha tumida (Stuxberg, 1878).

Solaster tumidus Stuxberg 1878; *Asterina tumida*: Danielssen and Koren 1881, 1884; *Asterina tumida tuberculata*: Danielssen and Koren 1884; *Rhegaster tumidus*: Sladen 1889, Döderlein 1900, Ludwig 1900; *Poraniomorpha (Rhegaster) tumida*: Grieg 1907.

Type locality: Novaya Zemlya. Distribution: Beaufort Sea; North Atlantic, west coast of Greenland, Iceland, Spitsbergen, northern Norway, throughout the Barents Sea, Kola Bay, White Sea, Kara Sea, Laptev Sea, East Siberian Sea; Hudson Bay; 9–1203 m.

Poraniopsis inflata (Fisher, 1906).

Alexandraster inflatus Fisher 1906; *Poraniopsis inflatus flexilis* Fisher 1910, Fisher 1911, A. M. Clark 1993, Pawson and Ahearn 2000; *Poraniopsis japonica* Fisher 1939; *Poraniopsis jordani* Gotschall 1994 (*nomen nudum*).

Type locality: Monterey Bay, near Pacific Grove, California. Distribution: Gulf of Alaska to Baja, California; Panama; Galapagos Islands; Japan; Korea; Russia; 80–1022 m; common.

Family Solasteridae

Crossaster borealis Fisher, 1906. Grooved sun star.

Solaster borealis Fisher 1911.

Type locality: Kodiak Island, Alaska. Distribution: San Diego, California, to the Bering Sea; Korea and North Japan; 161–2300 m; common.

Remarks: Djakonov (1950) created the subspecies *ochotensis* for the population living in the Sea of Okhotsk.

Crossaster papposus (Linnaeus, 1776). Rose star or snowflake star.

Asterias papposus Linnaeus 1776; *Asterias helianthemoides* Pennant 1777; *Asterias affinis* Brandt 1835; *Stellonia papposa* Agassiz 1836; *Solaster (Polyaster) papposa* Gray 1840; *Solaster papposus* Müller and Troschel 1842; *Crossaster affinis* Danielssen and Koren 1876; *Solaster affinis* Danielssen and Koren 1877; *Crossaster neptuni* Bell 1881; *Crossaster koreni* Verrill 1914; *Solaster (Crossaster) papposus* Boone 1933.

Type locality: North Atlantic and Asian oceans ("*Habitat in O. Europaeo et Asiatico*"). Distribution: Circumpolar; in the Pacific, to Washington and the Sea of Okhotsk; in the Atlantic, to 40°N latitude on the American side, and to Scandinavia and the British Isles on the northern European coast; intertidal zone to 1200 m; common.

Heterozonias alternatus (Fisher, 1906).

Crossaster alternatus Fisher 1906.

Type locality: Santa Barbara Islands, California. Distribution: Eastern Bering Sea, Gulf of Alaska, to San Diego, California; 302–1594 m; common south.

Lophaster furcilliger Fisher, 1905. Pink crested star.

Sarkaster validus Ludwig 1905 (*fide* Djakonov, 1950).

Type locality: Between Santa Barbara and San Nicholas Islands, California. Distribution: South of the Alaska Peninsula to southern California and to the Galapagos Islands; Okhotsk Sea; 350–2010 m; common.

Remarks: Grieg (1932:27) considered this species as "hardly more than a variety" of *L. furcifer*, an Atlantic species, and was considered a junior synonym by Mortensen (1932). It was treated as valid by Djakonov (1950), Baranova (1957), and Imaoka et al. (1991).

Lophaster vexator Fisher, 1910. Crested star.

Lophaster furcilliger vexator Fisher 1910.

Type locality: Point Arena, northern California. Distribution: Southern Bering Sea to northern California; 21–4200 m.

Remarks: This species is considered a junior synonym of *L. furcilliger* by some authors but is recognized here as a valid species.

Solaster dawsoni Verrill, 1880. Morning sun star.

Type locality: Virago Sound, British Columbia. Distribution: Monterey Bay, California, to the Aleutian

Islands and Kuril Islands; through Bering Strait to Point Franklin; intertidal zone to 420 m.

Solaster endeca (Linnaeus, 1771). Northern sunstar.

Asterias endeca Linnaeus 1771; *Asterias rumphii* Parelius 1768; *Asterias aspera* O.F. Müller 1776; *Asterias alboverrucosa* Brandt 1835; *Stellonia endeca* Agassiz 1836; *Solaster (Endeca) endeca* Gray 1840; *Solaster endeca decemradiata* Sladen 1889; *Solaster intermedius* Sluiter 1895; *Solaster galaxides* Verrill 1909.

Type locality: Norwegian Sea. Distribution: Circumboreal; Arctic Ocean; in the North Atlantic to Great Britain and Cape Cod; in the North Pacific to Puget Sound; intertidal zone to 1320 m.

Solaster hexactis Clark and Jewett, 2011.

Type locality: West of Buldir Island, Aleutian Islands. Distribution: Aleutian Islands, from west of Buldir Island to Seguam Pass; 8–384 m.

Solaster hypothryssus Fisher, 1910. White sun star.

Type locality: Shumagin Islands, Alaska. Distribution: Aleutian Islands to southern California; 247–1140 m.

Solaster paxillatus Sladen 1889. Orange sun star.

Type locality: South of Yokohama, Japan. Distribution: Japan to Bering Sea and Kodiak Island, Alaska; 11–700 m.

Solaster spectabilis Clark and Jewett, 2011.

Solaster dawsoni: (non Verrill) Fisher 1911 (in part), D'yakonov 1950 (in part), Kessler 1985 (in part).

Type locality: Southwest of Tanaga Island, Aleutian Islands. Distribution: Central Aleutian Islands from Chuginadak Island to near Kiska Island; 7–212 m.

Solaster stimpsoni Verrill, 1880. Striped sun star.

Asterias endeca, var. *decemradiata* Brandt 1835; *Crossaster vancouverensis* de Loriol 1897; *Solaster endeca decemradiata* Clark 1901; *Solaster constellatus* Verrill 1909.

Type locality: Ramsay Island, British Columbia. Distribution: Oregon to Bering Sea and North Japan; intertidal zone to 60 m; common.

Order Velatida

Family Pterasteridae

Diplopteraster multipes (M. Sars, 1866). Pincushion star.

Pteraster multipes Sars 1866; *Retaster mutlipes* Sladen 1889.

Type locality: Dröbak, Norway. Distribution: Circumpolar-Arctic; south to Chesapeake Bay and southwest of Ireland in North Atlantic; northern Japan and California in Pacific; and off South Africa; 57–1225 m; common.

Hymenaster koehleri Fisher, 1910.

Type locality: Bering Sea, between the Pribilof Islands and Unimak Island in the Aleutian Islands. Distribution: Known only from type locality; 3240 m; rare.

Hymenaster perissonotus Fisher, 1910.

Type locality: West of San Diego, California. Distribution: Bering Sea to Baja California; Sea of Okhotsk; 412–3239 m.

Remarks: Clark and Downey (1992) considered this species to be a junior synonym of *H. pellucidus* Wyville-Thompson, 1873, an Atlantic species. Lambert and Boutillier (2011) consider it a valid species.

Hymenaster quadrispinosus Fisher, 1905.

Hymenaster purpureus Ludwig 1905.

Type locality: San Diego, California. Distribution: Bering Sea to Panama; Labrador Sea; 1097–3610 m.

Pteraster jordani Fisher, 1905. Jordan's cushion star.

Type locality: San Diego, California. Distribution: Southeast Alaska to northern Baja California; 490–1800 m; common.

Pteraster marsippus Fisher, 1910. Prickly cushion star.

Type locality: Attu Island, Aleutian Islands. Distribution: Bering Sea; Sea of Japan; 95–640 m.

Pteraster militaris (Müller, 1776). Wrinkled star.

Asterias militaris Müller 1776; *Asteriscus militaris* Müller and Troschel 1842; *Pteraster aporus* Ludwig 1886; *Pterasterides aporus* Verrill 1909.

Type locality: Norway. Distribution: Circumpolar-Arctic, south in Pacific to Sea of Japan and Washington and in Atlantic to Cape Cod, Rockall Trough, and southern Norway; 10–1100 m; common.

Pteraster obscurus (Perrier, 1891). Obscure cushion star.

Hexaster obscurus Perrier 1891; *Pteraster (Temnaster) hexactis* Verrill 1894; *Pteraster hexactis* Verrill 1894; *Temnaster hexactis* Verrill 1895.

Type locality: Newfoundland. Distribution: Circumpolar; Bering Sea, from Bering Straits south to Bering Island, Kamchatka, and Unalaska; Spitsbergen, Greenland, Newfoundland; 19–510 m; common.

Pteraster octaster Verrill, 1909.

Type locality: Bering Island, Kamchatka. Distribution: Circumpolar; Chukchi Sea to Unalaska in the Northeast Pacific and to Kamchatka in the Northwest Pacific; Greenland; Spitsbergen; North Atlantic; 32–265 m; common.

Remarks: This species has been considered a synonym and a variety of *Pteraster obscurus* (Clark[4]).

Pteraster pulvillus M. Sars, 1861.

Type locality: Three miles north of Bergen, Norway. Distribution: Circumpolar; south in Atlantic to Cape

Cod and west of Galway, Ireland; in Pacific to northern Sea of Japan, Bering Sea, Aleutian Islands; 36–3700 m; uncommon.

Pteraster temnochiton Fisher, 1910. Rough cushion star.
Pteraster (Retaster) temnochiton Fisher 1910.
Type locality: Attu Island, Aleutian Islands. Distribution: Bering Sea; 51–247 m; uncommon.

Pteraster tesselatus Ives, 1888. Slime star.
Pteraster gracilis H. L. Clark 1901; *P. multispinus* H. L. Clark 1901; *P. hebes* Verrill 1909; *P. japonicus* Uchida 1931; *P. (Retaster) tesselatus* Fisher 1940.
Type locality: Kodiak Island, Alaska. Distribution: Commander and Aleutian islands, Bering Sea, south along the North American coast to Washington; 6–436 m; common.

?***Pteraster trigonodon*** Fisher, 1910.
Type locality: Santa Cruz Island, California. Distribution: Gulf of Alaska (NMFS, AFSC, RACE survey database, 2012) to California; type material collected between 817–933 m.

Pteraster willsi Clark and Jewett, 2011.
Type locality: West of Kiska Island, Rat Islands, Aleutian Islands. Distribution: Central and western Aleutians, Kanaga Island to near Attu Island; 11–166 m; rare.

Family Korethrasteridae

Peribolaster biserialis Fisher, 1905.
Type locality: Between Santa Catalina and Santa Barbara Islands, California. Distribution: South Bering Sea and California; 104–805 m; uncommon.

Order Spinulosida

Family Echinasteridae

Aleutihenricia beringiana (Djakonov, 1950). Bering henricia.
Henricia beringiana Djakonov 1950.
Type locality: Not traced. Distribution: Bering Strait, Bering Sea, Avacha Bay, Commander Islands; down to 200 m.

Aleutihenricia derjugini (Djakonov, 1950).
Henricia derjugini Djakonov 1950; *Aleutihenricia derjugini* Clark and Jewett 2010.
Type locality: Bering Sea. Distribution: Chukchi Sea south to Sea of Japan; 57–150 m.

Aleutihenricia federi Clark and Jewett, 2010.
Type locality: Adak Island, Aleutian Islands. Distribution: Alaska, Aleutian Islands, Stalemate Bank, west of Attu Island to Petrel Bank off Semisopochnoi Island; 16–219 m.

Henricia aleutica Fisher, 1911. Aleutian henricia.
Henricia longispina aleutica Fisher 1911.
Type locality: Attu Island, Aleutian Islands. Distribution: Aleutian Islands; 247–464 m.

Henricia aspera Fisher 1906. Sand-paper henricia.
Type locality: Heceta Bank, Oregon. Distribution: Bering Sea to Santa Barbara Island, southern California; Japan south to Sagami Bay; 48–570 m.

Henricia asthenactis Fisher, 1910. Weak-meshed henricia.
Type locality: Between Santa Barbara and San Nicholas Islands, California. Distribution: Kamchatka and Bering Sea south to Santa Barbara Island and Gulf of California; 91–1250 m.

?***Henricia clarki*** Fisher, 1910. Clark's henricia.
Cyllaster clarki A. H. Clark 1916.
Type locality: Santa Cruz Island, California. Distribution: Southeast Alaska (?) to the Revillagigedo Islands, Mexico; 226–1520 m.
Remarks: This species was apparently collected off Coronation Island, Southeast Alaska in 2003 during a NOAA/NMFS trawl survey (NMFS, AFSC, RACE survey database, 2012) but the record needs confirmation.

Henricia dyscrita Fisher, 1911. Short-spined henricia.
Type locality: Point Conception, California. Distribution: Aleutian Islands, seas of Okhotsk and Japan, California; 35–369 m.

Henricia echinata Clark and Jewett, 2010.
Type locality: Bay of Isles, Adak Island, Andreanof Islands, Aleutian Islands. Distribution: The Aleutian Islands (Adak Island and Amchitka Island); 16 m.

Henricia elachys Clark and Jewett, 2010.
Type locality: Rat Island, Rat Islands, Aleutian Islands. Distribution: Known only from type locality; 14 m.

Henricia gemma Clark and Jewett, 2010.
Henricia sanguinolenta eschrichtii (Müller and Troschel), Fisher 1911 (in part), non *Echinaster eschrichtii* Müller and Troschel 1842.
Type locality: Gannet Rocks, Kuluk Bay, Adak Island, Andreanof Islands, Aleutian Islands. Distribution: Alaska, Aleutian Islands, Andreanof and Rat Islands; 12–16 m.

Henricia insignis Clark and Jewett, 2010.
Henricia leviuscula multispina Fisher 1911, in part; *Henricia leviuscula spiculifera* (H. L. Clark) Verrill 1914 (in part), non *Cribrella spiculifera* H. L. Clark 1901.
Type locality: Vega Bay, Kiska Island, Rat Islands, Aleutian Islands. Distribution: Throughout the central Aleutians, from the Islands of Four Mountains, Chuginadak Island to Rat Islands, Kiska Island; 0–210 m.

Henricia iodinea Clark and Jewett, 2010.

Type locality: Rat Islands, Aleutian Islands. Distribution: Aleutian Islands, Fox Islands, Avatanak Island, to Rat Islands, Rat Island; 5–20+ m.

Henricia leviuscula (Stimpson, 1857). Blood star.

Linckia leviuscula Stimpson 1857; ?*Chaetaster californicus* Grube 1865; ?*Cribrella leviuscula* (Stimpson 1857), *Cribrella laeviuscula* (Stimpson 1857), or *Henricia leviuscula* (Stimpson 1857): Numerous authors reviewed by Fisher, 1911 and by A. Clark, 1996; *H. leviuscula* (Stimpson 1857): In part Fisher 1910, in part Verrill 1914, in part Djakonov 1961, in part Lambert, 1981; *H. leviuscula* var. A after Fisher: Djakonov 1950; *H. leviuscula* var. B: In part Fisher 1911; *H. leviuscula* var. *leviuscula*: In part Verrill 1914; *H. leviuscula* var. *lunula*: In part Verrill 1914.

Type locality: Puget Sound, Washington. Distribution: Southern Alaska (Kenai Peninsula) south to Puget Sound; intertidal zone to 110 m.

Remarks: Eernisse et al. (2010) redescribed *H. leviuscula* and restricted it to only one of several similar species in the eastern North Pacific. They considered many of the varieties and subspecies as either undescribed species or *nomen dubia*.

Henricia lineata Clark and Jewett, 2010.

Henricia leviuscula spiculifera (H. L. Clark) Verrill 1914 (in part), non *Cribrella spiculifera* H. L. Clark 1901; *Henricia spiculifera* (H. L. Clark) Djakonov 1950 (in part), non *Cribrella spiculifera* H. L. Clark 1901; *Henricia* sp. A, R. N. Clark, 2006. www.jaxshells.org/henricia2.htm.

Type locality: Chichagof Harbor, Attu Island, Near Islands, Aleutian Islands. Distribution: Aleutian Islands from Avatanak Island, Fox Islands, to Chichagof Harbor, Attu Island; 6–25 m.

Remarks: Clark and Jewett (2010) mentioned that *H. lineata* has been confused with *H. multispina* Fisher, 1910 under the mistaken identification of *H. spiculifera* (Clark 1901). They considered *H. spiculifera* as *nomen inquirendum* because the type material is apparently lost.

Henricia longispina Fisher, 1910. Long-spined henricia.

Henricia longispina longispina (Fisher 1910).

Type locality: Queen Charlotte Sound, off Fort Rupert, Vancouver Island, British Columbia. Distribution: Bering Sea to the Sea of Okhotsk and Vancouver Island; 28–512 m.

Henricia multispina Fisher, 1910.

Henricia leviuscula multispina Fisher 1910.

Type locality: Near Semisopochnoi Island, Aleutian Islands. Distribution: Oregon to Bering Sea, Bering Strait, the Aleutian Islands, and south to Simushir, Kuril Islands; intertidal zone to 435 m.

Remarks: This species has been considered a junior synonym of *Henricia leviuscula spiculifera* (Clark, 1901) by Hayashi (1973), but Clark and Jewett (2010) believed it differs from Clark's (1901) description.

Henricia pumila Eernisse, Strathmann and Strathmann, 2010.

?*Cribrella laeviuscula* var. *crassa* H. L. Clark 1901; *Henricia leviuscula* variety F, in part, Fisher 1911; *Henricia leviuscula* (non Stimpson, 1857), in part, Hopkins, 1967.

Type locality: Mar Vista Resort, San Juan Island, Washington. Distribution: Sitka, Alaska, south to Punta Banda, Baja California, Mexico (not recorded in southern California); intertidal to subtidal.

Remarks: Eernisse et al. (2010) mentioned that *Henricia leviuscula* (Stimpson, 1857) has been a dumping ground for many incompletely characterized eastern North Pacific members of *Henricia*. *Henricia pumila* is the only small, brooding species of this genus presently known in the Puget Sound and the San Juan Archipelago, Washington. Eernisse and colleagues are currently conducting studies (morphological and molecular) on many shallow water species of the genus.

Henricia rhytisma Clark and Jewett, 2010.

Henricia sp. C, Clark, 2007. www.jaxshells.org/henricia2.htm.

Type locality: Alaska, Aleutian Islands, Little Sitkin Island, near Finger Point. Distribution: Alaska, Aleutian Islands, Fox Islands, Avatanak Island to Tahoma Bank, southeast of Buldir Island; 6–91 m.

Henricia sanguinolenta (O. F. Müller, 1776). Fat henricia or Northern blood star.

Asterias sanguinolenta O. F. Müller 1776; *Echinaster sarsi* Müller and Troschel 1844; *Echinaster sanguinolenta* Sars 1844; *Cribrella sanguinolenta* Lütken 1857; *Henricia sanguinolenta* Bell 1891; *Cribrella sanguinolenta* forma *laevior* Michailovskij 1902 and *C. pectinata* Verrill 1894; Pacific subsp. *miliaris* and var. *rudis* Verrill 1914, presumably referable to *H. tumida* Verrill 1914 used for *sanguinolenta* by Fisher (1930); *Henricia sanguinolenta* Fisher 1911, non *H. sanguinolenta* (O. F. Müller 1776), = *H. tumida* Verrill 1914 according to Madsen (1987); *H. sanguinolenta* Nobre 1930, non *H. sanguinolenta* (O. F. Müller 1776), = *H. oculata* (Pennant 1777) according to Madsen (1987); *H. sanguinolenta* Heding 1935, non *H. sanguinolenta* (O. F. Müller 1776), = *H. pertusa* (O. F. Müller 1776) according to Madsen (1987); *H. sanguinolenta* Rasmussen 1965, non *H. sanguinolenta* (O. F. Müller 1776), = *H. perforata* (O. F. Müller 1776) according to Madsen (1987).

Type locality: Norway. Distribution: Circumpolar; to Cape Hatteras in the western North Atlantic, England in the eastern North Atlantic, and Washington in the Pacific; intertidal zone to 518 m.

Henricia tumida Verrill, 1914. Tumid henricia.

Henricia arctica Verrill 1914; *Henricia borealis* Verrill 1914; *Henricia nipponica* Hayashi 1940.

Type locality: Dutch Harbor, Unalaska, Aleutian

Islands. Distribution: Arctic Alaska, Bering Sea, Sea of Okhotsk and northern Sea of Japan; intertidal zone to 97 m.

Henricia uluudax Clark and Jewett, 2010.

Henricia spiculifera (H. L. Clark) Verrill 1914 (in part), non *Cribrella spiculifera* H. L. Clark 1901; *Henricia leviuscula multispina* Fisher 1911 (in part), non *Henricia leviuscula multispina* Fisher 1910.

Type locality: Alaska, Aleutian Islands, Fox Islands, Unalaska Island, northwest entrance to Unalaska Bay, inside Eider Point. Distribution: Fox Islands, Avatanak Island to Andreanof Islands, Atka Island, Crescent Bay, point at west end; 0–12 m.

Henricia vermillion Clark and Jewett, 2010. Aleutian common blood star.

Henricia leviuscula (Stimpson) Fisher 1911 (in part), non *Linckia leviuscula* Stimpson 1857; *Henricia leviuscula leviuscula* (Stimpson) Lambert 2000 (in part), non *Linckia leviuscula* Stimpson 1857.

Type locality: Alaska, Aleutian Islands, Fox Islands, Unalaska Island, Sumner Bay. Distribution: Umnak, Akun, and Avatanak islands; intertidal zone to 16 m.

Odontohenricia ahearnae Clark and Jewett, 2010.

Type locality: Alaska, Aleutian Islands, Islands of Four Mountains, Carlisle Island, east side. Distribution: Carlisle Island to Rat Islands, east of Kiska Island; 7–442 m.

Odontohenricia aurantia Clark and Jewett, 2010.

Henricia sanguinolenta (Müller), Fisher 1910, variety C (in part), non *Asterias sanguinolenta* O. F. Müller 1776).

Type locality: Alaska, Aleutian Islands, Rat Islands, Rat Island. Distribution: Rat Island east to Chuginadak Island; 7–17 m.

Odontohenricia fisheri Rowe and Albertson, 1988. Fisher's toothed henricia.

Henricia leviuscula annectens: Fisher 1911 (in part), non *H. leviuscula annectens* Fisher 1910.

Type locality: West of the Strait of Juan da Fuca, between Vancouver Island and Washington. Distribution: Gulf of Alaska to Washington; 108–210 m; common.

Odontohenricia violacea Clark and Jewett, 2010.

Type locality: Alaska, Aleutian Islands, Andreanof Islands, south of Amatignak Island. Distribution: Rat and Andreanof Islands; 14–95 m; rare.

Order Forcipulatida

Family Asteriidae

Asterias amurensis Lutken, 1871. Purple-orange star.

Asterias pectinata Brandt 1835 (non Linnaeus); *Asterias rubens* var. *migratum* Sladen 1878; *Allasterias migrata* Sladen 1879; *Asterias rubens* Murdoch 1885; *Asterias rathbuni* (Verrill 1909); *Parasterias albertensis* Verrill 1914; *Asterias acervispinis* Djakonov 1950; *Asterias flabellifera* Djakonov 1950; *Asterias gracilispinis* Djakonov 1950; *Asterias latissima* Djakonov 1950.

Type locality: Gulf of Tartary, Amur, Russia. Distribution: Arctic Ocean to northern Gulf of Alaska; Japan; South Australia; 10–180 m; common.

Remarks: The population in South Australia is introduced (Mah[17]).

Evasterias echinosoma Fisher, 1926. Giant star.

Type locality: North of the end of the Alaska Peninsula. Distribution: Southern Bering Sea, from Bristol Bay to Unalaska; the coast of Asia, from Avatka Bay, Kamchatka, to the Okhotsk Sea; 20–88 m.

Evasterias retifera Djakonov, 1938. Western star.

Evasterias tabulata Djakonov 1938; *Evasterias retata* Djakonov 1950.

Type locality: Not traced. Distribution: Bering and Okhotsk seas, Aleutian Islands; intertidal zone to 40 m.

Evasterias troschelli (Stimpson, 1862). Mottled star.

Asterias epichlora Brandt 1835; *A. troschelli* Stimpson 1862; *A. brachiata* Perrier 1875; *A. (Diplasterias) epichlora* De Loriol 1897; *A. victoriana* Verrill 1909; *A. troschelii* var. *rudis* Verrill 1909; *A. acanthostoma* Verrill 1909; *Leptasterias macouni* Verrill 1914; *L.inequalis* Verrill 1914; *L. epichlora miliaris* var. *subnodulosa* 1914; *Evasterias troschelli* var. *rudis* 1914; *E. troschelli* var. *densa* 1914; *E. troschelli* var. *alveolata* Verrill 1914; *E. troschelli* var. *subnodosa* Verrill 1914; *E. troschelli* var. *parvispina* Verrill 1914; *Evasterias acanthostoma* Verrill 1914.

Type locality: Puget Sound, Washington. Distribution: East coast of Kamchatka and the Pribilof Islands to Monterey, California; intertidal zone to 75 m.

Leptasterias alaskensis (Verrill, 1909). Alaskan six-rayed star.

Asterias epichlora var. *alaskensis* Verrill 1909; *Leptasterias epichlora alaskensis* Verrill 1914; *L. pribilofensis* Fisher 1930; *L. shumaginensis* Fisher 1930.

Type locality: Dutch Harbor, Unalaska Island, Aleutian Islands. Distribution: Cook Inlet, Kodiak Island, Aleutian Islands, Pribilof Islands, Southeast Alaska to northern Vancouver Island, Kuril Islands, Bering Island, and Medni Island; intertidal zone to 20 m.

Remarks: Members of the *Leptasterias alaskensis* species complex are highly variable and comprise at least five different forms (Fisher, 1930; Lambert, 2000). All of the forms except *L. alaskensis asiatica* are found in Alaska.

Leptasterias aleutica Fisher, 1930.

Type locality: Adak Island, Aleutian Islands. Distribution: Agattu, Amchitka, Kiska, Adak, Atka, and Unalaska islands, Aleutian Islands; intertidal to 20 m.

Remarks: Flowers and Foltz (2001) showed that this species shares mitochondrial haplotypes with *L. camtschatica,* which suggests recent genetic divergence and possible incomplete lineage sorting or frequent hybridization. These two species can be differentiated, however, by morphological and ecological characteristics.

Leptasterias arctica (Murdoch, 1885). Arctic star.

Asterias arctica Murdoch 1885; *Asterias mulleri* var. *islandica* Levinsen 1887; *Asterias mulleri* Ludwig 1900; *Leptasterias hyperborea* Verrill 1909; *Leptasterias beringensis* Fisher 1930; *Leptasterias glomerata* Djakonov 1938.

Type locality: Ten miles west of Point Franklin, Alaska (Arctic Ocean). Distribution: Southern Bering Sea and Aleutian Islands to Arctic Ocean, eastward to Dolphin and Union straits, Northwest Territories, Canada; low tide to 79 m.

Leptasterias asteira Fisher, 1930.

Type locality: Adak Island, Andreanof Island Group, Aleutian Islands. Distribution: Pribilof Islands, Shumagin Islands, Andreanof Islands; 16–26 m.

Leptasterias camtschatica dispar (Brandt, 1835).

Leptasterias dispar Verrill 1914.

Type locality: Dutch Harbor, Unalaska Island, Aleutian Islands. Distribution: Attu Island, Aleutian Islands, to the Shumagin Islands and Pribilof Islands; intertidal zone to 20 m.

Leptasterias coei coei Verrill, 1914. Coe's six-rayed star.

Orthasterias merriami Verrill 1914.

Type locality: Berg Bay (Glacier Bay), Alaska. Distribution: Juneau to Shelikof Strait, Alaska; intertidal zone to 187 m.

Leptasterias coei truculenta Fisher, 1930. Giant Aleutian six-rayed star.

Type locality: Ridge, Captains Bay, Unalaska. Distribution: Unalaska to Semisopochnoi Island, Aleutian Islands; 79–128 m.

Leptasterias groenlandica (Steenstrup, 1857). Greenland star.

Asteracanthion groenlandicus Steenstrup 1857; *Asterias cribraria* Stimpson 1862; *Asterias groenlandica* Stimpson 1864; *Asterias inermis* Bell 1881; *Asterias Spitsbergensis* Danielssen and Koren 1884; *Asterias groenlandica* var *longimana* Kalisch-ewsky 1907; *Asterias hyperborea* Kalischewsky 1907; *Ctenas-terias cribraria* Verrill 1914; *Leptasterias obtecta* Verrill 1914; *Asterias mulleri groenlandica* von Hofsten 1915.

Type locality: Greenland. Distribution: Arctic; circumpolar; in the Pacific it extends as far south as the southern part of the Bering Sea (north of Unimak Island, Aleutian Islands); 5–150 m; common in the Arctic.

Leptasterias hexactis (Stimpson, 1862).

Asterias hexactis Stimpson 1862; *Asterias aequalis* Stimpson 1862; *Asterias vancouveri* Perrier 1875; *Leptasterias epichlora* Verrill 1914; *Leptasterias aequalis* var. *compacta* Verrill 1914; *Leptasterias aequalis* var. *concinna* Verrill 1914.

Type locality: Vancouver Island, British Columbia. Distribution: Alaska Peninsula (Gulf of Alaska) to Puget Sound, Washington; intertidal zone.

Leptasterias hylodes Fisher, 1930. Aleutian star.

Type locality: Shumagin Islands, Aleutian Islands. Distribution: Aleutian Islands to south of the Alaska Peninsula; 45–124 m.

Leptasterias leptalea Verrill, 1914.

Type locality: Virgin Bay, Prince William Sound. Distribution: Known only from type locality; depth unknown.

Remarks: The type material is not extant, and Verrill only included a small figure of the ventral surface, which lacks detail.

Leptasterias leptodoma Fisher, 1930.

Type locality: Humboldt Bay, Shumagin Islands. Distribution: Shumagin Islands to Attu and Agattu islands in western Aleutian Islands; intertidal zone to 35 m.

Leptasterias polaris acervata (Stimpson, 1862). Polar six-rayed star.

Asterias acervata Stimpson 1862; *A. philippii* Bell 1881; *A. polaris* var. *acervata* Verrill 1909; *A. polythela* Verrill 1909; *Stenasterias macropora* A. H. Clark 1920; *Asterias acervata borealis* A. H. Clark 1920.

Type locality: Bering Strait. Distribution: Arctic Ocean to Bristol Bay, Bering Sea, Attu Island, and on the Siberian coast to Indian Point; 9–70 m; common.

Leptasterias polaris katherinae (Gray, 1840). Katherin's six-rayed star.

Asterias katherinae Gray 1840; *Asteracanthion katherinae* Müller and Troschel 1842; *Asterias douglasi* Perrier 1875; *As-terias dubia* Verrill 1909; *Pisaster grayi* Verrill 1914; *Leptaste-rias confinis* Djakonov 1950.

Type locality: Mouth of the Columbia River. Distribution: Strait of Georgia; Glacier Bay, Juneau, Alaska; Mitkof Island, Southeast Alaska; 1–10 m; common.

Leptasterias stolacantha Fisher, 1930.

Leptasterias (Nesasterias) stolacantha Fisher 1930.

Type locality: North coast of Unalaska Island, Aleutian Islands. Distribution: Bering Sea, in the vicinity of the Aleutian Islands; from Unalaska to Kiska islands; 10–108 m.

Leptasterias tatei Clark and Jewett, 2015.

Type locality: Thumb Bay, Adak Island, Aleutian

Islands, Alaska (51°50.08N, 176°32.31W). Distribution: Central Aleutian Islands, Andreanof Islands and Rat Islands; 8–16 m.

Lethasterias nanimensis (Verrill, 1914). Black-spined star.

Asterias nanimensis Verrill 1914; *Distolasterias nanimensis* Fisher 1923.

Type locality: ?Departure Bay, Nanaimo, British Columbia. Distribution: Southeast Alaska, British Columbia, Strait of Juan de Fuca; shallow subtidal zone to 102 m.

Remarks: Fisher (1928) had doubts about the type locality. He recognized a subspecies, *L. n. chelifera* (Verrill) that ranged from the Bering Strait to the Sea of Japan and to Kodiak Island, Gulf of Alaska, from low tide to 224 m; common.

Orthasterias koehleri (de Loriol, 1897). Rainbow star.

Asterias koehleri de Loriol 1897; *Orthasterias biordinata* Verrill 1914; *Orthasterias columbiana* Verrill 1914; *Orthasterias leptostyla* Fisher 1928; *Orthasterias montereyensis* Fisher 1928.

Type locality: Saanich Inlet, Vancouver Island, British Columbia. Distribution: Eastern Aleutian Islands to Santa Rosa Island, California; intertidal zone to 230 m; common.

Pisaster brevispinus (Stimpson, 1857). Giant pink star.

Asterias brevispina Stimpson 1857; *Asterias paucispina* Stimpson 1862; *Asterias (Pisaster) papulosa* Verrill 1909; *Pisaster papulosus* Verrill 1914.

Type locality: Near mouth of San Francisco Bay, California. Distribution: Sitka, Alaska, to Santa Barbara, California; intertidal zone to 128 m.

Pisaster ochraceus (Brandt, 1835). Purple or ochre star.

Asterias ochracea Brandt 1835; *Asterias janthina* Brandt 1835; *Asteracanthion margaritifer* Müller and Troschel 1842; *Asterias conferta* Stimpson 1862; *Asterias fissispina* Stimpson 1862; *Pisaster confertus* Verrill 1914; *Pisaster ochraceus* var. *nodiferus* Verrill 1914; *Pisaster fissispinus* Verrill 1924.

Type locality: Sitka, Alaska. Distribution: Prince William Sound, to Cedros Island, Baja California; intertidal zone to 97 m.

Pycnopodia helianthoides (Brandt, 1835). Sunflower star.

Asterias helianthoides Brandt 1835.

Type locality: Sitka, Alaska. Distribution: Unalaska, Aleutian Islands, to San Diego, California; intertidal zone to 435 m; common to abundant.

Stephanasterias albula (Stimpson, 1853).

Asteracanthion albulus Stimpson 1853; *Asteracanthion problema* Steenstrup 1854; *Asterias albula* Stimpson 1864; *Stichaster albulus* Verrill 1866; *Asterias problema* Lutken 1872; *Asterias gracilis* Perrier 1881; *Nanaster albulus* Perrier 1894.

Type locality: Grand Manan, New Brunswick (at mouth of Bay of Fundy). Distribution: Circumpolar; western North Atlantic south to Cape Hatteras; east, south, and west coasts of Greenland; from Ellesmere Land, Jones Sound, Cumberland Gulf; Iceland; Jan Mayen; Spitsbergen; Murman coast; Barents Sea; Kara Sea and Kara Strait; Matochkin Strait, Novaya Zemlya; North Pacific from southern Bering Sea to Lynn Canal, southern Alaska; Sea of Japan; 29–2195 m.

Stylasterias forreri (de Loriol, 1887). Fish eating star.

Asterias forreri de Loriol 1887; *Asterias (Urasterias) forcipulata* Verrill 1909; *Orthasterias forreri* Verrill 1914; *Orthasterias forreri forcipulata* Verrill 1914; *Orthasterias leptolena* Verrill 1914.

Type locality: Santa Cruz, Monterey Bay, California. Distribution: Kodiak Island, Alaska, to San Diego, California; 6–532 m; common.

Urasterias lincki (Müller and Troschel, 1842).

Pentadactylosaster reticulatus Linck 1733; *Asterias lincki* Müller and Troschel 1842; *Asteracanthion lincki* (Müller and Troschel); *Asteracanthion stellionura* Perrier 1869 (*fide* Fisher 1930); *Asterias gunneri* Danielssen and Koren 1884 (*fide* Doderlein 1900); *Asterias enopla* Verrill 1895.

Type locality: Unknown. Distribution: Chukchi and Beaufort seas; south to Nova Scotia in the western Atlantic and to northern Norway in the eastern Atlantic; 5–2000 m.

Remarks: This species has been found in the western Beaufort Sea (Clark[4]) and was recently collected in the eastern Chukchi Sea (senior author, personal observ.).

Family Pedicellasteridae

Ampheraster marianus (Ludwig, 1905).

Sporasterias mariana Ludwig 1905.

Type locality: Near Tres Marias Islands, Mexico. Distribution: Southeast Alaska to Mexico; 49–1240 m; uncommon.

Anteliaster nannodes Fisher, 1928.

Anteliaster microgenys nannodes Fisher 1928.

Type locality: Bowers Bank, Bering Sea. Distribution: Bering Sea and the Aleutian Islands; 452–458 m.

Pedicellaster magister Fisher, 1923. Majestic star.

Type locality: Cape Monati, Bering Island. Distribution: Southern Bering Sea, from the Commander Islands to Unimak; south along the Alaskan coast to Kasaan Bay, Prince of Wales Island; British Columbia; 77–1776 m; uncommon.

Tarsaster alaskanus Fisher, 1928.

Type locality: Indian Point, vicinity of Naha Bay, Behm Canal, Southeast Alaska. Distribution: Gulf of Alaska to Oregon; 198–2100 m.

Family Zoroasteridae

Myxoderma sacculatum Fisher, 1904.

Zoroaster (Myxoderma) sacculatus Fisher 1904; *Zoroaster evermanni* Clark (non Fisher) 1913; *Myxoderma derjugini* Djakonov 1968.

Type locality: Near Point Piños, Monterey Bay, California. Distribution: Bowers Bank and the northern Bering Sea to central California; 329–1678 m.

Sagenaster evermanni (Fisher, 1905).

Zoroaster evermanni Fisher 1905; *Zoroaster evermanni mordax* Fisher 1919.

Type locality: Between San Clemente and San Diego, California. Distribution: Aleutian Islands; Queen Charlotte Islands; Washington to Mexico; 100–2710 m.

Zoroaster actinocles Fisher, 1919.

Type locality: Yunaska Island, Aleutian Islands. Distribution: Known only from type locality; 2226 m.

Zoroaster ophiurus Fisher 1904.

Type locality: San Diego, California. Distribution: Bering Sea to northern Peru; 695–2300 m.

Order Brisingida

Family Freyellidae

Astrocles actinodetus Fisher, 1917.

Type locality: Prince of Wales Island, Southeast Alaska. Distribution: Southeast Alaska to Oregon; Kamchatka opposite Avacha Bay, Russia; 2870–4200 m.

Family Hymenodiscididae

?***Hymenodiscus exilis*** (Fisher, 1905).

Brisinga exilis Fisher 1905; *Brisingella exilis*: Fisher 1917.

Type locality: San Diego, California. Distribution: Bering Sea to southern California; 800–1940 m.

Hymenodiscus pannychia (Fisher, 1928).

Brisingella pannychia Fisher 1928.

Type locality: Bowers Bank, Bering Sea. Distribution: Bering Sea to central Vancouver Island, British Columbia; 1410–2300 m.

?***Hymenodiscus pusilla*** (Fisher, 1917).

Brisingella pusilla Fisher 1917.

Type locality: Point San Pedro, Santa Cruz Island, California. Distribution: Bering Sea and Aleutian Islands to southern California; 550–1936 m.

Class Ophiuroidea—The Brittle Stars

The Ophiuroidea occurs exclusively in marine waters, from the intertidal zone to the abyss and from the poles to the tropics. About 2000 ophiuroids are extant worldwide (Lambert and Austin, 2007), with approximately 73 species occurring in Alaskan waters (Table 1). Several sources of secondary literature were used to compile the information for the list of ophiuroids: Clark (1911), Djakonov (1954), Downey (1969), and Lambert and Austin (2007).

Order Euryalida

Family Gorgonocephalidae

Astrochele laevis H. L. Clark, 1911. White serpent star.

Type locality: Moorovskoy (=Pumicestone) Bay, Unalaska Island, Aleutian Islands. Distribution: Eastern Bering Sea and the Aleutian Islands; 50–880 m.

?***Astrocladus pardalis*** (Döderlein, 1902). Gray basket star.

Astrophyton pardalis Döderlein 1902.

Type locality: Japan. Distribution: ?Western Aleutian Islands to Japan; >400 m; rare.

Gorgonocephalus arcticus Leach, 1819. Northern basket star.

Astrophyton agassizi Stimpson 1854, *Gorgonocephalus agassizi* (Stimpson 1854).

Type locality: Not traced. Distribution: Chukchi and Bering seas; Bering Strait; North Atlantic; Gulf of Mexico; 21–698 m.

Remarks: This species might be one of the many varieties of *G. eucnemis*.

Gorgonocephalus eucnemis (Müller and Troschel, 1842). Basket star.

Astrophyton eucnemis Müller and Troschel 1842; *Astrophyton caryi* Lyman 1860; *Astrophyton stimpsoni* Verrill 1869; *Astrophyton malmgreni* Danielssen and Koren 1877; *Gorgonocephalus japonicus* Döderlein 1902; *Gorgonocephalus sagaminus* Doflein 1906.

Type locality: Eastern North Atlantic. Distribution: Alaska to California; Bering Sea to the Sea of Japan, Okhotsk Sea, Laptev Sea; Arctic Ocean across to Greenland, Finnmark, Spitsbergen, and south to Cape Cod; 8–1850 m; common.

Family Asteronychidae

Asteronyx longifissus Döderlein, 1927. Long-slit serpent star.

Type locality: IndoPacific. Distribution: Southeast Alaska to southern California; IndoPacific; >600 m.

Remarks: This species was only recently reported from Sitka Sound, Alaska (Baldwin[11])

Asteronyx loveni Müller and Troschel, 1842. Giant serpent star.

Ophiuropsis lymani Studer 1884; *Asteronyx locardi* Koehler

1896; *Asteronyx dispar* Lütken and Mortensen 1899; *Asteronyx Cooperi* Bell 1909; *Ophiuraster patersoni* Litvinova 1998.

Type locality: Sweden. Distribution: Amphiboreal; in the Pacific, from the Bering Sea to Baja California, Mexico, and Timor Island, Indonesia, and the Indian Ocean; in the Atlantic, from the coast of Norway southwest down the coast of North America to St. Vincent in the Lesser Antilles; 100–4721 m, usually in 300–600 m; common.

Astronebris tatafilius Downey, 1967.

Type locality: Amatignal Island, Aleutian Islands. Distribution: Known only from type locality; 37 m.

Family Euryalidae

Asteroschema sublaeve Lütken and Mortensen, 1899. Long-armed serpent star.

Astroschema sublaeve Lütken and Mortensen 1899.

Type locality: Gulf of Panama. Distribution: Gulf of Alaska to Gulf of Panama; Galapagos Islands; >1000 m.

Order Ophiurida

Family Amphilepididae

?***Amphilepis patens*** Lyman, 1879.

Amphilepis platytata H. L. Clark 1911.

Type locality: Valparaiso, Chile. Distribution: ?Gulf of Alaska to South America; 1790–3950 m.

Family Amphiuridae

Amphiodia craterodmeta Clark, 1911.

Diamphiodia craterodmeta (H. L. Clark 1911).

Type locality: Gulf of Tartary, southwestern coast of Sakhalin Island, Japan. Distribution: Arctic Ocean south to Gulf of Alaska; western North Pacific; 10–975 m.

Amphiodia occidentalis (Lyman, 1860).

Amphiura occidentalis Lyman 1860; *Amphipholis occidentalis* (Lyman 1860); *Diamphiodia occidentalis* (Lyman 1860).

Type locality: Monterey, California. Distribution: Kodiak Island, Alaska, to central California; intertidal zone to 367 m.

Amphiodia periercta H. L. Clark, 1911.

Ophiophragmus periercta (H. L. Clark 1911); *Amphiodia peloria* Bush 1921.

Type locality: Captain's Harbor, Unalaska, Alaska. Distribution: Aleutian Islands, to central California; southern Kuril Islands to the Sea of Japan; intertidal zone to 92 m.

Amphiodia (***Amphispina***) ***urtica*** (Lyman, 1860).

Amphiura urtica Lyman 1860; *Amphipholis urtica*: Ljungman 1867; ?*Ophiophragmus urtica*: Fell 1962; *Amphiura barbarae* Lyman 1880; *Amphiodia Barbarae*: Lyman 1880; *Diamphiodia barbarae*: Fell 1962.

Type locality: Puget Sound, Washington. Distribution: Shumagin Islands, Alaska, to Mexico; 9–?708 m.

Amphioplus euryaspis (H. L. Clark, 1911).

Amphiodia euryaspis H. L. Clark 1911.

Type locality: California, 36°44′45″N, 120°57′W. Distribution: Bering Sea to southern Alaska; Aleutian Islands; Japan; Korea; Gulf of Tartary; 124–536 m.

Amphioplus (Amphioplus) macraspis (Clark, 1911).

Amphiodia macraspis Clark 1911.

Type locality: Either Washington or eastern Japan. Distribution: Southern Alaska to Washington; Bering Sea to Okhotsk Sea; 1–211 m.

Amphioplus (Amphioplus) strongyloplax (H. L. Clark, 1911).

Amphiodia strongyloplax H. L. Clark 1911.

Type locality: Flattery Rocks, Washington. Distribution: Gulf of Alaska to the Mexican border; 40–623 m.

Amphipholis pugetana (Lyman, 1860).

Amphiura pugetana Lyman 1860.

Type locality: Puget Sound, Washington. Distribution: Gulf of Alaska to southern California; 0–1204 m.

Amphipholis squamata (Delle Chiaje, 1828).

Ophiura elegans Leach 1815; *Amphiura elegans* (Leach 1815); *Asterias squamata* Delle Chiaje 1828; *Amphioplus squamata* (Delle Chiaje 1828); *Amphiura squamata* (Delle Chiaje 1828); *Axiognathus squamata* (Delle Chiaje 1828); *Amphiura neglecta* Forbes 1843; *Ophiolepis tenuis* Ayres 1854; *Amphiura tenera* Lütken 1856; *Amphipholis tenera* (Lütken 1856); *Amphiura tenuispina* Ljungman 1865; *Amphipholis tenuispina* (Ljungman 1865); *Amphipholis squamata tenuispina* (Ljungman 1865); *Amphipholis appressa* Ljungman 1872; *Amphipholis kinbergi* Ljungman 1872; *Amphipholis lineata* Ljungman 1872; *Amphipholis patagonica* Ljungman 1872; *Amphiura parva* Hutton 1878; *Amphipholis australiana* H. L. Clark 1909; *Ophiactis minor* Döderlein 1910; *Amphipholis minor* (Döderlein 1910); *Amphipholis japonica* Matsumoto 1915; *Amphipholis tissieri* Reys 1961.

Type locality: Naples, Italy. Distribution: Cosmopolitan, including Arctic Alaska to southern California; intertidal zone to 828 m.

Amphiura carchara H. L. Clark, 1911.

Amphiura carchara ochotensis Djakonov 1952.

Type locality: Prince of Wales Island, Alaska. Distribution: Bering Sea to Mexico; Japan; 1143–2869.

Amphiura leptodoma H. L. Clark, 1911.

Type locality: Agattu Island, Aleutian Islands. Distribution: Eastern Bering Sea and the Aleutian Islands; 549–881 m.

Amphiura sundevalli (Müller and Troschel, 1842).

Ophiolepis sundevalli Müller and Troschel 1842; *Amphiura holboelli* Lütken 1855.

Type locality: North Atlantic. Distribution: Circumpolar; 27–91 m.

Family Ophiacanthidae

Ophiacantha adiaphora H. L. Clark, 1911.
Type locality: Bowers Bank, Bering Sea. Distribution: Bering Sea to the Aleutian Islands; Japan; 298–1247 m.

Ophiacantha atopostoma H. L. Clark, 1911.
Type locality: Bowers Bank, Bering Sea. Distribution: Bering Sea; 629 m.

Ophiacantha bathybia H. L. Clark, 1911.
Type locality: West of Prince of Wales Island, Alaska. Distribution: Bering Sea to Baja California, Mexico; Japan Trench; 1587–6450 m.

Ophiacantha bidentata (Bruzelius, 1805).
Asterias bidentata Bruzelius 1805; *Ophiocoma bidentata* (Bruzelius 1805); *Ophiocoma arctica* Müller and Troschel 1842; *Ophiacantha spinulosa* Müller and Troschel 1842; *Ophiacantha groenlandica* Müller and Troschel 1844; *Ophiocoma echinulata* Forbes 1852; *Ophiacantha hibernica* Farran 1913.
Type locality: Not traced. Distribution: Circumpolar, including Arctic Alaska; littoral to bathyal zones.

?***Ophiacantha diplasia*** H. L. Clark, 1911.
Ophiophthalmus diplasia (H. L. Clark 1911).
Type locality: Heceta Bank, Oregon. Distribution: Gulf of Alaska (RACEbase record) to southern California; 71–1178 m.

Ophiacantha enneactis H. L. Clark, 1911. Nine-armed brittle star.
Type locality: Agattu Island, Aleutian Islands. Distribution: Aleutian Islands; 300–600 m.

Ophiacantha eurypoma H. L. Clark, 1911.
Type locality: West of Prince of Wales Island, Alaska. Distribution: Southeast Alaska to California; 1040–2869 m.

Ophiacantha lepidota H. L. Clark, 1911.
Type locality: Shumagin Bank, Alaska. Distribution: Known only from type locality; 1143 m.

Ophiacantha macrarthra H. L. Clark, 1911.
Type locality: Bowers Bank, Bering Sea. Distribution: Known only from type locality; 1068 m.

Ophiacantha rhachophora H. L. Clark, 1911. Little ophiacanthid.
Type locality: Goto Islands, Japan. Distribution: Bering Sea to California; Sea of Japan; Sagami Sea; 115–1068 m.

Ophiacantha trachybactra H. L. Clark, 1911.
Type locality: Sakhalin Island, Siberia. Distribution: Aleutian Islands; Bering Sea, and southern Alaska; British Columbia; western North Pacific; 800–2000 m.

Ophiacanthella acontophora (H. L. Clark, 1911).
Ophiomitra acontophora H. L. Clark 1911.
Type locality: Agattu Island, Aleutian Islands. Distribution: Bering Sea and Aleutian Islands; Japan; 419–2226 m.

Ophiolimna antarctica (Lyman, 1879).
Ophioconis antarctica Lyman 1879; *Ophiacantha antarctica* (Lyman 1879); *Toporkovia antarctica* (Lyman 1879); *Ophiacantha polaris* Koehler 1901; *Ophioconis papillata* H. L. Clark 1911 (*fide* Fell 1961); *Ophiolimna papillata* (H. L. Clark 1911); *Toporkovia fragilis* Djakonov 1954.
Type locality: Near Heard Island, southern Indian Ocean. Distribution: Bering Sea and Aleutian Islands; southern Indian Ocean; 90–640 m.

Ophiolimna bairdi (Lyman, 1883).
Ophiacantha bairdi Lyman 1883.
Type locality: Maine. Distribution: Bering Sea to Panama; Aleutian Islands; Japan; West Indies; Canary Islands; North Atlantic; 825–2549 m.

Ophiophthalmus cataleimmoidus (Clark, 1911). Spiny-brown brittle star.
Ophiacantha cataleimmoida H. L. Clark 1911.
Type locality: Shumagin Bank, Alaska. Distribution: Bering Sea to Washington; Japan to the Sea of Okhotsk; Kuril Islands; 130–1940 m.

Ophiophthalmus normani (Lyman, 1879). Rosy brittle star.
Ophiacantha normani Lyman 1879.
Type locality: Sagami Bay, Japan. Distribution: Bering Sea (Alaska) to Mexico; Japan to the Sea of Okhotsk; 37–3000 m.

Ophioripa marginata Koehler, 1922.
Type locality: Amchitka Island, Aleutian Islands. Distribution: Known only from type locality; 881 m.

Ophioripa nugator Koehler, 1922.
Type locality: Amchitka Island, Aleutian Islands. Distribution: Known only from type locality; 881 m.

Ophiosemnotes brevispina (Clark, 1911). Short-spined brittle star.
Ophiolebes brevispina H. L. Clark 1911.
Type locality: Seguam Island, Aleutian Islands. Distribution: Bering Sea and Aleutian Islands; 100–518 m.

Ophiosemnotes diaphora (Clark, 1911).
Ophiolebes diaphora H. L. Clark 1911.
Type locality: Rat Island, Aleutian Islands. Distribution: Bering Sea and Aleutian Islands; 98–881 m.

Ophiosemnotes pachybactra (Clark, 1911). Thick-spined brittle star.
Ophiolebes pachybactra H. L. Clark 1911.
Type locality: East Cape, Attu Island, Aleutian Islands. Distribution: Aleutian Islands; 60–881 m.

Ophiosemnotes paucispina (Clark, 1911). Little-spined brittle star.

Ophiolebes paucispina H. L. Clark 1911.

Type locality: Seguam Island, Aleutian Islands. Distribution: Bering Sea and Aleutian Islands; 60–881 m.

Ophiosemnotes tylota (Clark, 1911). Long-spined brittle star.

Ophiolebes tylota H. L. Clark 1911.

Type locality: Rat Island, Aleutian Islands. Distribution: Bering Sea and Aleutian Islands; 100–885 m.

Family Ophiactidae

Ophiopholis aculeata (Linnaeus, 1767). Daisy brittle star.

Asterias aculeata Linnaeus 1767; *Ophiolepis scolopendrica* Müller and Troschel 1842.

Type locality: Europe. Distribution: ?Circumpolar; Chukchi and Bering seas to British Columbia and Japan; Scandinavian coast to south coast of Britain; North American side of the Atlantic Ocean south to Cape Cod; shallow subtidal zone to 1000 m, but rarely found deeper than 300 m; common.

Ophiopholis bakeri McClendon, 1909.

Type locality: San Diego, California. Distribution: Southeast Alaska, near Sitka, to Baja California, Mexico; 18–1204 m.

Ophiopholis japonica Lyman, 1879.

Type locality: Yokohama, Japan. Distribution: Aleutian Islands to Knight Inlet, British Columbia; Bering Sea to Japan; 15–1884 m.

Ophiopholis kennerlyi Lyman, 1860. Daisy brittle star.

Ophiopholis caryi Lyman 1860; *Ophiopholis aculeata kennerlyi* (Lyman 1860).

Type locality: Puget Sound, Washington. Distribution: Central Alaska to Santa Barbara, California; intertidal zone to 435 m.

Ophiopholis longispina H. L. Clark, 1911. Long-spined brittle star.

Type locality: Sea Lion Rock, Washington. Distribution: Aleutian Islands to San Diego, California; 507–1253 m.

Family Ophiolepididae

Ophiomusium lymani Thomson, 1873. Lyman's deep-sea brittle star.

Ophiomusa lymani (Wyville-Thomson 1873).

Type locality: Southwestern Ireland. Distribution: Cosmopolitan, including Alaska to South America; 130–3435 m.

Family Ophiomyxidae

Ophioschiza monacantha H. L. Clark, 1911.

Type locality: Seguam Island, Aleutian Islands. Distribution: Known only from type locality; 518 m.

Ophioscolex corynetes (Clark, 1911). Soft serpent star.

Ophiocynodus corynetes Clark 1911.

Type locality: Cascade Head, Oregon. Distribution: Gulf of Alaska to California; 630–1253 m.

Ophioscolex glacialis Müller and Troschel, 1842.

Ophioscolex fragilis Verrill 1899.

Type locality: North Atlantic. Distribution: Both sides of the North Atlantic; a voucher specimen from the Chukchi Sea is archived at the Smithsonian National Museum of Natural History (USNM 1080632); bathyal zone.

Family Ophiotrichidae

?***Ophiothrix spiculata*** Le Conte, 1851.

Ophiothrix dumosa Lyman 1860.

Type locality: Panama. Distribution: Gulf of Alaska (NMFS, AFSC, RACE survey database, 2012) to northern Chile; low intertidal zone to 2059 m.

Family Ophiuridae

?***Amphiophiura superba*** (Lütken and Mortensen, 1899). Superb armored brittle star.

Ophioglypha superba Lütken and Mortensen 1899; *Ophiura superba* (Lütken and Mortensen 1899); *Ophiura hadra* H. L. Clark 1911; *Amphiophiura hadra* (H. L. Clark 1911).

Type locality: Gulf of California, Mexico. Distribution: ?Gulf of Alaska to Mexico; 400–1500 m.

Anthophiura axiologa H. L. Clark, 1911.

Type locality: West point of Yunaska Island, Aleutian Islands. Distribution: Aleutian Islands; 2226 m; uncommon.

Ophiocten hastatum Lyman, 1878.

Ophiura hastata (Lyman 1878); *Ophiocten longispinum* Koehler 1896; *Ophiocten pacificum* Lüken and Mortensen 1899; *Ophiocten latens* Koehler 1906; *Ophiocten australis* Baker 1979.

Type locality: Cape of Good Hope, South Africa. Distribution: Alaska to South America; Indian Ocean; Atlantic; 2515 m; uncommon.

Ophiocten sericeum (Forbes, 1852).

Ophiura sericea Forbes 1852; *Ophiocten kroeyeri* Lütken 1855.

Type locality: British Isles. Distribution: Both sides of the Atlantic; widely distributed in the Arctic; a voucher specimen from Point Barrow, Alaska, is archived at the Smithsonian Museum of Natural History (USNM 1080633); 5–4500 m.

Ophioleuce oxycraspedon Baranova, 1955.

Type locality: North of the Commander Islands (western North Pacific). Distribution: Bering Sea to British Columbia; western North Pacific; ?North Atlantic; 1331–2440 m.

Ophiopenia disacantha H. L. Clark, 1911.

Type locality: Iliuliuk Harbor, Unalaska, Aleutian Islands. Distribution: Eastern Bering Sea to southern Alaska; 16–366 m.

Ophiopenia tetracantha H. L. Clark, 1911.

Type locality: Khoudoubine Islands, Alaska. Distribution: Bering Sea to southern Alaska; 16–2780 m.

?Ophiosphalma jolliense (McClendon, 1909). Red brittle star.

Ophiomusium jolliensis McClendon 1909.

Type locality: San Diego, California. Distribution: ?Southern Alaska to Cabo San Lucas, Mexico; Japan; 150–1500 m.

Ophiura atacta H. L. Clark, 1911.

Type locality: Shumagin Bank, Alaska. Distribution: Known only from type locality; 1143 m.

Ophiura bathybia H. L. Clark, 1911.

Type locality: Atka Island, Aleutian Islands. Distribution: Bering Sea and southern Alaska to Point Conception, California; 2869–4872 m.

Ophiura cryptolepis H. L. Clark, 1911. Hidden-scale brittle star.

Type locality: Davidson Bank, Alaska. Distribution: Bering Sea to Washington; Japan; 180–1143 m.

Ophiura flagellata (Lyman, 1878).

Ophioglypha flagellata Lyman 1878; *Gymnophiura flagellata* (Lyman 1878); *Gymnophiura caerulescens* Lütken and Mortensen 1899.

Type locality: Sagami Bay, Japan. Distribution: Bering Sea to Mexico; Sagami Sea; Uraga Strait; Dutch East Indies; Andaman Islands; South Africa; 140–1820 m.

Ophiura irrorata (Lyman, 1878).

Ophioglypha irrorata Lyman 1878; *Homalophiura irrorata* (Lyman 1878); *Ophiura (Ophiuroglypha) irrorata* (Lyman 1878); *Ophioglypha orbiculata* Lyman 1878; *Ophiglypha grandis* Verrill 1894; *Ophioglypha involuta* Koehler 1897; *Ophiura involuta* (Koehler 1897); *Ophioglypha tumulosa* Lütken and Mortensen 1899; *Ophioglypha figurata* Koehler 1908; *Ophioglypha integra* Koehler 1908.

Type locality: Portugal. Distribution: Cosmopolitan; 503–3292 m.

Ophiura leptoctenia H. L. Clark, 1911.

Type locality: Sea Lion Rock, Washington. Distribution: Bering Sea and western Aleutian Islands to northern California; Sea of Japan to Sakhalin Island.; 9–3239 m; common.

Remarks: H. L. Clark (1911) noted a gap in distribution between Sakhalin and the Aleutians.

Ophiura luetkenii (Lyman, 1860). Gray brittle star.

Ophioglypha lutkeni Lyman 1860.

Type locality: Puget Sound, Washington. Distribution: Bering Sea to Cedros Island, Mexico; 9–1265 m.

Ophiura quadrispina H. L. Clark, 1911. Four-spined brittle star.

Type locality: North of Unalaska, Alaska. Distribution: Bering Sea to the Aleutian Islands; Okhotsk Sea and the Sea of Japan; 104–975 m.

Ophiura sarsii Lütken, 1855. Notched brittle star.

Ophiura arctica Lütken 1855; *Ophiura coriacea* Lütken 1855.

Type locality: Spitsbergen. Distribution: Circumpolar; throughout the Arctic Ocean; Bering Sea to California; Japan and Korea; south to the Baltic Sea in Europe and Cape Hatteras in the U.S.; 0–1460 m; common.

Stegophiura nodosa (Lütken, 1855). Nodose armored brittle star.

Ophiura nodosa Lütken 1855; *Ophioglypha nodosa* (Lütken 1855); *Amphiophiura nodosa* (Lütken 1855).

Type locality: Greenland. Distribution: Arctic Alaska and Canada south to the Gulf of Alaska; Okhotsk Sea; Sakhalin (Aniwa Bay); European waters; western North Atlantic; 15–100 m; common in the Arctic.

Stegophiura ponderosa (Lyman, 1878). Great-armored brittle star.

Ophioglypha ponderosa Lyman 1878; *Amphiophiura ponderosa* (Lyman 1878); *Ophiura ponderosa* (Lyman 1878).

Type locality: Japan. Distribution: Aleutian Islands to southern California; Sea of Okhotsk to Japan; 73–1436 m; common.

Class Echinoidea—The Sea Urchins and Sand Dollars

There are about 940 extant species of echinoids (sea urchins and sand dollars) worldwide (Follo and Fautin, 2001), and approximately 25 species occur in Alaskan waters (Table 1). Species of the genus *Strongylocentrotus,* the most common echinoid genus in our area, are difficult to differentiate in the field because color is highly variable in some species. Jensen (1981) separated the species on the basis of differences in the shape of the pedicellariae, the tubercles, the fine structure of the teeth, and the number of wedges in the spines. Several sources of secondary literature were used to compile the information for the list of echinoids: Mortensen (1943), Schultz (2005), Lambert and Austin (2007), and Lambert and Boutillier (2011).

Order Cidaroida

Family Ctenocidaridae

Aporocidaris fragilis Agassiz and Clark, 1907.

Dorocidaris fragilis (Agassiz and Clark 1907); *Plegiocidaris fragilis* (Agassiz and Clark 1907).

Type locality: Gulf of Alaska, south of Shumagin Islands, Alaska. Distribution: Bering Sea to southern Alaska; western North Pacific (Kamchatka); 3000–4000 m.

Order Echinothurioida

Family Echinothuriidae

Sperosoma biseriatum Döderlein, 1901.

Type locality: Kenya, South Africa. Distribution: Southeastern Bering Sea to British Columbia; India; South Africa; >1000 m.

Sperosoma giganteum A. Agassiz and H. L. Clark, 1907.

Type locality: Omai Saki Light, Japan. Distribution: Southern Alaska to Oregon; Japan; >1000 m.

Tromikosoma tenue (Agassiz, 1879).

Phormosone tenuis Agassiz 1879; *Echinosoma tenue* (Agassiz 1879); *Tromikosoma mordens* de Meijere 1904.

Type locality: Japan. Distribution: Aleutian Islands to the Molucca Sea; 1530–3375 m.

Order Camarodonta

Family Strongylocentrotidae

Allocentrotus fragilis (Jackson, 1912). Pink urchin.

Strongylocentrotus fragilis Jackson 1912; *Toxocidaris fragilis* (Jackson 1912).

Type locality: Catalina Island, California. Distribution: Southern Alaska to Baja California; 50–1260 m; common.

Strongylocentrotus droebachiensis (O. F. Müller, 1776). Green urchin.

Echinus droebachiensis O. F. Müller 1776; *Echinometra droebachiensis* (O. F. Müller 1776); *Echinus (Toxopneustes) droebachiensis* (O. F. Müller 1776); *Euryechinus droebachiensis* (O. F. Müller 1776); *Toxopneustes droebachiensis* (O. F. Müller 1776); *Echinus neglectus* Lamarck 1816; *Echinus (Toxopneustes) neglectus* (Lamarck 1816); *Toxopneustes neglectus* (Lamarck 1816); *Echinus granularis* Say 1826; *Echinus subangularis* Fleming 1829; *Strongylocentrotus chlorocentrotus* Brandt 1835; *Echinus chlorocentrotus* Des Moulins 1837; *Echinus granulates* Gould 1841; *Euryechinus granulates* (Gould 1841); *Echinus (Toxopneustes) duebenii* Agassiz and Desor 1846; *Toxopneustes carnosus* Agassiz 1863; *Toxopneustes pictus* Norman 1869; *Echinus pictus* (Norman 1869); *Strongylocentrotus pictus* (Norman 1869).

Type locality: Maine. Distribution: Widespread Arctic and northern boreal species; from the Arctic Ocean to Washington and the Sea of Japan in the Pacific; from Hudson Bay, Greenland, Iceland, northern Europe to Chesapeake Bay, Scotland and the western part of the Baltic Sea in the Atlantic; 0–300 m; common.

Strongylocentrotus franciscanus (Agassiz, 1863). Giant red urchin.

Toxocidaris franciscana Agassiz 1863.

Type locality: San Francisco, California. Distribution: North Alaska to Mexico; Japan; intertidal zone to 125 m; common.

Strongylocentrotus pallidus (G. O. Sars, 1871). Pale or white urchin.

Strongylocentrotus granularis (Say 1827); *Toxopneustes pallidus* G. O. Sars 1871; *Strongylocentrotus echinoides* A. Agassiz and H. L. Clark 1907; *Strongylocentrotus sachalinicus* Clark 1912.

Type locality: Norway. Distribution: Widely distributed in the Arctic Ocean; south to Oregon in the eastern North Pacific and to Korea in the western North Pacific; in the Atlantic to Massachusetts Bay, Iceland, Shetland Islands, and Norway; Greenland; 50–1600 m.

Remarks: Mortensen (1943) regarded this species as a junior synonym of *S. droebachiensis*, but other authors (Jensen, 1981; Schultz, 2005) have considered it a separate species.

Strongylocentrotus polyacanthus Agassiz and Clark, 1907. Aleutian urchin.

Toxocidaris polyacanthus (Agassiz and Clark 1907).

Type locality: Milne Bay, Simushir Island, Kuril Islands, Japan. Distribution: Aleutian Islands to western Gulf of Alaska; 1–60+ m.

Strongylocentrotus purpuratus (Stimpson, 1857). Purple urchin.

Echinus purpuratus Stimpson 1857; *Loxechinus purpuratus* (Stimpson 1857); *Toxocidaris purpuratus* (Stimpson 1857).

Type locality: San Francisco, California. Distribution: Gulf of Alaska to Mexico; intertidal zone to 161 m.

Order Clypeasteroida

Family Dendrasteridae

Dendraster excentricus (Eschscholtz, 1829). Asymmetrical or excentric sand dollar.

Scutella excentrica Eschscholtz 1829; *Echinarachnius excentricus* (Eschscholtz 1829); *Dendraster excentricus elongatus* H. L. Clark 1935.

Type locality: Coast of Unalaska Island and Kamchatka Seas. Distribution: Gulf of Alaska to Baja California; Kamchatka; 0–90 m.

Family Echinarachniidae

Echinarachnius parma (Lamarck, 1816). Northern sand dollar.

Scutella parma Lamarck 1816; *Echinodiscus parma* (Lamarck 1816); *Phelsumaster parma* (Lamarck 1816); *Phelsumia parma* (Lamarck 1816); *Scutella trifara* 1826; *Echinarachnius atlanticus* Agassiz 1841; *Echinarachnius rumphii* Agassiz 1841; *Echinarachnius australiae* Michelin 1859; *Echinarachnius undulatus* Michelin 1859.

Type locality: Indian Ocean. Distribution: Arctic Alaska in the Beaufort and Chukchi seas to western Aleutian Islands, Gulf of Alaska, and Prince William Sound; Kamchatka, Sakhalin, and northern Japan in the western North Pacific; from Labrador to Chesapeake Bay in the western North Atlantic; intertidal zone to 150 m; common.

Family Taiwanasteridae

Marginoproctus djakonovi Budin, 1980. Fuzzy button.

Type locality: Gulf of Alaska. Distribution: Aleutian Islands; Gulf of Alaska; east Kamchatka; Commander and Kuril islands; Okhotsk Sea; 10–800 m.

Order Holasteroida

Family Pourtalesiidae

Ceratophysa ceratopyga valvaecristata Mironov, 1976.

Type locality: Eastern North Pacific. Distribution: Aleutian Islands and southern Alaska to southern California; Japan; >4000 m.

Cystocrepis setigera (A. Agassiz, 1898).

Echinocrepis setigera A. Agassiz 1898.

Type locality: Galera Point, Ecuador. Distribution: Southern Alaska to central America; >3000 m.

Echinocrepis rostrata Mironov, 1973.

Type locality: Southern California. Distribution: Aleutian Islands and southern Alaska to Baja California; >3000 m.

Pourtalesia tanneri A. Agassiz, 1898.

Type locality: Between Bindloe and Wenham islands, Galapagos Islands. Distribution: Southern Alaska; southern California to Baja California; Galapagos Islands; >1000 m.

Pourtalesia thomsoni Mironov, 1975.

Type locality: Gulf of California. Distribution: Southern Alaskan coast to Baja California; >3000 m.

Family Urechinidae

Antrechinus drygalskii perfidus (Mironov, 1976).

Urechinus drygalskii perfidus Mironov 1976.

Type locality: Western North Pacific. Distribution: Southern Alaska; western North Pacific; deep water.

Cystechinus loveni A. Agassiz, 1898.

Urechinus loveni (A. Agassiz 1898); *Cystechinus purpureus* A. Agassiz and H. L. Clark 1907.

Type locality: Southwest of Acapulco, Mexico. Distribution: Eastern Bering Sea to Mexico; western North Pacific; >3000 m.

Urechinus naresianus A. Agassiz, 1879.

Type locality: Between Prince Edward Island and the Crozet Islands. Distribution: Cosmopolitan, including the eastern Bering Sea and Aleutian Islands; >2000 m.

Order Spatangoida

Family Aeropsidae

Aeropsis fulva (A. Agassiz, 1898).

Aerope fulva A. Agassiz 1898; *Aeropsis sibogae* Koehler 1914.

Type locality: Between northern Ecuador and Costa Rica. Distribution: Eastern Bering Sea to South America; western North Pacific; >1000 m.

Family Schizasteridae

Brisaster latifrons (A. Agassiz, 1898). Mud urchin.

Schizaster latifrons A. Agassiz 1898; *Schizaster townsendi* A. Agassiz 1898; *Schizaster (Brisaster) townsendi*: Mortensen 1907; *Brisaster townsendi*: Clark 1917; *Opissaster latifrons* (A. Agassiz 1898).

Type locality: Gulf of California. Distribution: Bering Sea and Aleutian Islands to Baja California; Galapagos Islands; 9–2817 m; common.

?***Brisaster owstoni*** Mortensen, 1950. Western mud urchin.

Type locality: Japan. Distribution: ?Aleutian Islands; Japan; >200 m.

Schizaster lacunosus (Linnaeus, 1758).

Echinus lacunosus Linnaeus 1758; *Brisaster lacunosus*: Lamark 1816; *Micraster lacunosus*: Lamarck 1816; *Schizaster ventricosus* Gray 1851; *Schizaster japonicus* A. Agassiz 1879.

Type locality: Indian Ocean. Distribution: Cosmopolitan; 20–1000 m.

Class Holothuroidea—The Sea Cucumbers

There are about 1250 extant species of holothuroideans (sea cucumbers) worldwide, with the highest number in the Asia Pacific region (Du et al., 2012). Approximately 49 species of sea cucumbers occur in Alaskan waters (Table 1). Species in some genera, for example *Cucumaria*, can be problematic to identify (see below in the remarks section for *Cucumaria frondosa japonica*).

Positive identifications in problematic groups require a microscopic examination of ossicles. Even then, some of the original descriptions are poor and definitive identifications can be difficult (Lambert[20]). Several sources of secondary literature were used to compile the information for the list of holothuroideans: Clark (1907), Edwards (1908), Deichmann (1938), Lambert (1986, 1996, 1997, 1998), Madsen and Hansen (1994), Kirkendale and Lambert (1995), Levin and Gudimova (1998, 2000), Levin (2006), and Lambert and Boutillier (2011).

Order Aspidochirotida

Family Stichopodidae

Apostichopus californicus (Stimpson, 1857). California or giant red cucumber.

Holothuria californicus Stimpson 1857; *Stichopus fuscus* Theél 1886; *Stichopus californicus*: H. L. Clark 1901, 1922; *Parastichopus californicus*: Deichmann 1937 *et auctt.*

Type locality: Tomales Bay, California. Distribution: Gulf of Alaska to Cedros Island, Baja California; intertidal zone to 216 m; common.

Apostichopus leukothele (Lambert, 1986). Giant orange cucumber.

Parastichopus leukothele Lambert 1986.

Type locality: Queen Charlotte Islands, British Columbia. Distribution: Southern Alaska to California; 20–285 m.

Family Synallactidae

Capheira mollis Ohshima, 1915.

Type locality: Bowers Bank, north of Adak Island, Aleutian Islands. Distribution: Aleutian Islands to central Vancouver Island; 220–1353 m.

Paelopatides confundens Théel, 1886. Swimming cucumber.

Paelopatides agassizii Théel 1886.

Type locality: South Pacific off Chile. Distribution: Bering Sea to Chile; Galapagos Islands; >1000 m.

Pseudostichopus mollis Théel, 1886. Hot dog cucumber.

Pseudostichopus trachus Sluiter 1901; *Pseudostichopus nudus* Ohshima 1915; *Pseudostichopus (Pseudostichopus) alatus* Imaoka 1990.

Type locality: Unknown (South Atlantic?). Distribution: Gulf of Alaska to Oregon; western Aleutian Islands; eastern and western South Pacific; South Atlantic; Antarctica; New Zealand; 180–2200 m; common.

Synallectes challengeri (Théel, 1886). Challenger cucumber.

Stichopus challengeri Théel 1886.

Type locality: South Atlantic. Distribution: Kodiak Island, Alaska to Chile; Antarctica; New Zealand; 20–366 m; common.

Order Dactylochirotida

Family Ypsilothuriidae

Ypsilothuria bitentaculata (Ludwig, 1893).

Sphaeothuria bitentaculata Ludwig 1893; *Echinocucumis typica* H.L. Clark 1923.

Type locality: Panama. Distribution: Cosmopolitan, including the eastern Bering Sea to British Columbia and Oregon; 375–4000 m.

Order Dendrochirotida

Family Cucumariidae

Cucumaria fallax Ludwig, 1875.

Type locality: Alaska. Distribution: Bering Sea to Gulf of Alaska; Aleutian Islands; Sea of Okhtosk; 40–150 m; common.

?***Cucumaria frondosa frondosa*** (Gunnerus, 1767).

Holothuria frondosa Gunnerus 1767; *Holothuria pentactes* Linnaeus 1767; *Cladodactyla pentactes* (Müller) Brandt 1835; *Holothuria grandis* Forbes and Goodsir 1839; *H. fucicola* Forbes and Goodsir 1839; *Cucumaria assimilis* Düben and Koren 1846; *Botryodactyla grandis* Ayres 1851; *Cucumaria minuta* (Fabricius) Lütken 1857; non *Cucumaria frondosa japonica* Lambert 1984, 1997.

Type locality: Trondheim, west coast of Norway. Distribution: Norwegian coast south to the entrance of Skagerrak; northern North Sea; Scotland; Shetlands; Faroe Islands; Iceland; Spitsbergen; Barents Sea; Franz Josef Land; Kara Sea; Greenland; eastern North America south to New England; ?Arctic coast of Alaska (Point Barrow); 0–200 m.

Cucumaria frondosa japonica (Semper, 1868). Giant black or orange footed cucumber.

Cucumaria japonica Semper 1868.

Type locality: Japan. Distribution: Aleutian Islands to British Columbia; western North Pacific; 25–130 m.

Remarks: Some authors consider *C. japonica* to be a subspecies of *C. frondosa* to distinguish the eastern North Pacific populations (Lambert, 1997) from the Atlantic forms, and some consider *C. frondosa* and *C. japonica* to be separate species (Levin and Gudimova, 2000). There is much confusion in the literature regarding the taxonomic status and distribution of these species (Levin and Gudimova, 2000), and it is clear that further work needs to be done to clarify these issues.

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[20] Lambert, P. 2012. Personal commun. Royal British Columbia Museum, Department of Invertebrate Zoology, Victoria, BC V8W 9W2, Canada.

Cucumaria ijimai Ohshima, 1915.

Type locality: Western Aleutian Islands. Distribution: Known only from type locality; littoral zone.

Cucumaria lamberti Levin and Gudimova, 1998.

Type locality: Peril Strait, Chichagof Island, Southeast Alaska. Distribution: Known only from type locality; 3–6 m; rare.

Cucumaria miniata (Brandt, 1835). Orange sea cucumber or red sea gherkin.

Cladodactyla (Polyclados) miniata Brandt 1835; *Stereoderma miniata* (Brandt 1835); *Cucumaria albida* Selenka 1867; *Cucumaria japonica*: Lampert 1885, H. L. Clark 1902, Edwards 1907.

Type locality: Sitka, Alaska. Distribution: Aleutian Islands and southern Alaska to San Benito Island, Baja California; intertidal zone to 225 m, mostly shallower than 30 m.

Cucumaria pallida Kirkendale and Lambert, 1995.

Cucumaria fallax: McEuen (thesis 1986, 1987) (non Ludwig 1874), Kozloff 1987 (non Ludwig 1874); *Eupentacta quinquesemita*: Snively 1978 (non Selenka 1867).

Type locality: Entrance to east arm of Brundige Inlet, Dundas Island, British Columbia. Distribution: Auke Bay, Alaska, to Santa Rosa Island, California; intertidal zone to 91 m.

Cucumaria vegae Théel, 1886. Tiny black sea cucumber.

Type locality: Bering Island. Distribution: Western Aleutian Islands to the Queen Charlotte Islands, British Columbia; Hokkaido, Japan; intertidal to shallow subtidal zones.

Ekmania barthii (Troschel, 1846).

Orcula barthii Troschel 1846; *Anaperus cigaro* Troschel 1846; *Thyonidium pellucidum* Düben and Koren 1846 (non Vahl 1808); *Orcula luminosa* Lampert 1885; *Semperia barroisi* Lampert 1885.

Type locality: North Atlantic. Distribution: Widely distributed in the Arctic; sublittoral to 100 m.

Ekmania glaucum (Ohshima, 1915).

Phyllophorus glaucus Ohshima 1915.

Type locality: Western Aleutian Islands. Distribution: Known only from type locality; littoral zone.

Ocnus glacialis (Ljungman, 1879).

Cucumaria glacialis Ljungman 1879; *Ludwigia glacialis* (Ljungman 1879).

Type locality: Spitsbergen. Distribution: Circum-Arctic, including the Chukchi and Beaufort seas; depth unknown; common.

Pseudocnus lamperti (Ohshima, 1915).

Cucumaria lamperti Ohshima 1915.

Type locality: Commander Islands. Distribution: Western Aleutian Islands and Commander Islands; littoral zone.

Thyonidium diomedeae (Ohshima, 1915).

Phyllophorus diomedeae Ohshima 1915; *Ekmania diomedeae*: Lambert 1997 *et auctt.*

Type locality: Rebun Island, Hokkaido, Japan. Distribution: Kodiak Island, Alaska; southeastern Alaska; Chukchi Sea; Japan; 37–220 m; uncommon.

Thyonidium drummondii (Thompson, 1840).

Holothuria drummondii Thompson 1840; *Cucumaria communis* Forbes 1841; *Duasmodactyla commune* (Forbes 1841); *Thyone portlockii* Forbes 1841; *Thyonidium dubeni* Norman 1869; *Cucumaria nobilis* Ludwig 1875; *Cucumaria perspicua* Ludwig 1875.

Type locality: Ireland. Distribution: Southern Alaska; North Atlantic; shallow subtidal zone to >200 m.

Thyonidium kurilensis (Levin, 1984). Furry sea cucumber.

Duasmodactyla kurilensis Levin 1984.

Type locality: Onekotan Island, Kuril Islands. Distribution: Central Alaska to northern Washington; Kuril Islands; Russia; 10–228 m; uncommon.

Family Phyllophoridae

Pentamera calcigera Stimpson, 1851.

Cucumaria calcigera (Stimpson 1851); *Cucumaria korenii* Lütken 1857.

Type locality: Coast of New England. Distribution: Arctic; Alaska, Bering and Chukchi seas; eastern Russia; Labrador; 33–80 m.

Pentamera lissoplaca (Clark, 1924). Crescent or smooth-plated sea cucumber.

Cucumaria lissoplaca Clark 1924.

Type locality: Alert Bay, Queen Charlotte Strait, British Columbia. Distribution: Southern Alaska to Monterey Bay, California; intertidal zone to 200 m; uncommon.

Pentamera populifera (Stimpson, 1864). Abundant sea cucumber.

Pentacta populifer Stimpson 1864; *Cucumaria tenuicoriata* Wells 1924.

Type locality: Puget Sound, Washington. Distribution: Gulf of Alaska to Cedros Island, Baja California; shallow subtidal zone to 256 m.

Pentamera pseudocalcigera Deichmann, 1938. U-shaped white sea cucumber.

Cucumaria pseudocalcigera (Deichmann 1938).

Type locality: California. Distribution: Southeastern Alaska to southern California; 22–300 m.

Family Psolidae

Psolidium bidiscum Lambert, 1996.

Psolidium (?) *bullatum*: Hadfield 1961 (non Ohshima 1915); *Psolidium bullatum*: McEuen 1987, Kozloff 1987, McEuen and Chia 1991 (non Ohshima 1915).

Type locality: Misery Bay, Finlayson Arm, Saanich Inlet, Vancouver Island, British Columbia. Distribution: Southeastern Alaska in Burnett Inlet, Etolin Island, south to Pacific Grove, California; intertidal zone to 200 m, most commonly between 30 and 60 m.

Psolidium bullatum Ohshima, 1915. Aleutian armored cucumber.

Type locality: Aleutian Islands. Distribution: British Columbia; Washington State; ?Florida (Gulf of Mexico and western North Atlantic); 20–200 m.

Psolus chitinoides H. L. Clark, 1901. Armored or creeping pedal cucumber.

Psolus californicus Fisher 1905.

Type locality: Unknown. Distribution: Aleutian Islands and Gulf of Alaska to Baja California; intertidal zone to 247 m; common.

Psolus fabricii (Düben and Koren, 1846). Scarlet psolus cucumber.

Cuvieria fabricii Düben and Koren 1846; *Cuvieria sitchaensis* Brandt 1835.

Type locality: Norway. Distribution: Widespread in the Northern Hemisphere, including Arctic Alaska to southeastern Bering Sea; 10–80 m.

Psolus japonicus Östergren, 1898. Red-orange armored cucumber.

Type locality: Tsugaru Strait, northern Japan. Distribution: Aleutian Islands to the Gulf of Alaska; Japan; 30–150 m.

Psolus peronii Bell, 1883.

Psolus (*Lophothuria*) *peronii* Bell 1883; *Psolus sadko* Djakonov 1946.

Type locality: Unknown. Distribution: Arctic Canada and Alaska and the Bering Sea (USNM database: http://collections.nmnh.si.edu/search/iz/); Gulf of Alaska; depth unknown.

Psolus phantapus (Strussenfelt, 1765). Arctic armored cucumber.

Holothuria phantapus Strussenfelt 1765; *Psolus laevigatus* Ayres 1854; *Psolus granulatus* Ayres 1854; *Psolus regalis* Verrill 1866.

Type locality: Denmark. Distribution: Arctic-boreal, circumpolar, including Arctic Alaska and the Bering Sea; 20–200 m.

Psolus squamatus (Koren, 1844). White-scaled or white creeping pedal cucumber.

Cuvieria squamata Koren 1844; *Psolus squamatus* var. *segregatus*: Perrier 1905 *et auctt.*; *Psolus pauper*: Ludwig 1894.

Type locality: Norway. Distribution: Eastern Bering Sea to southern Chile; British Isles; Norwegian coast; 37–1500 m, usually in deeper water; common.

Family Sclerodactylidae

Eupentacta pseudoquinquesemita Deichmann, 1938.

Type locality: Aleutian Islands. Distribution: Aleutian Islands to Puget Sound, Washington; intertidal zone to 200 m.

Eupentacta quinquesemita (Selenka, 1867). Stiff-footed sea cucumber.

Cucumaria quinquesemita Selenka 1867; *Cucumaria chronhjelmi* Théel 1886.

Type locality: Mendocino, California. Distribution: Sitka, Alaska, to Baja California; intertidal zone to 55 m.

Order Elasipodida

Family Laetmogonidae

Pannychia moseleyi Théel, 1882. Deep sea papillate cucumber.

Laetmophasma fecundum Ludwig 1893; *Pannychia moseleyi* var. *henrici* Ludwig 1894; *Pannychia multiradiata* Sluiter 1901; *Pannychia pallida* Fisher 1907; *Pannychia moseleyi virgulifera* Ohshima 1915.

Type locality: New South Wales, Australia. Distribution: Eastern Bering Sea to Mexico; Aleutian Islands; western North Pacific; South Pacific; Hawaii; 212–2598 m; common.

Order Apodida

Family Chiridotidae

Chiridota albatrossi Edwards, 1907. Red worm-like cucumber.

Type locality: Not specifically stated (either British Columbia or southeast Alaska). Distribution: Eastern Bering Sea to Oregon; Japan; littoral zone.

Chiridota discolor Eschscholtz, 1829.

Liosoma sitchaense Brandt 1835.

Type locality: Sitka, Alaska. Distribution: Chukchi and eastern Bering seas to California; Aleutian Islands; western North Pacific; mainly littoral, but also can be found in depths greater than 1000 m.

Chiridota laevis (O. Fabricius, 1780).

Holothuria laevis O. Fabricius 1780.

Type locality: Arctic eastern North Atlantic. Distribution: Alaska to British Columbia; North Atlantic; littoral zone.

Family Myriotrochidae

Myriotrochus rinkii Steenstrup, 1851.

Chiridota brevis Huxley 1852.

Type locality: East Greenland. Distribution: Circumpolar, reaching the Bering Sea in the North Pacific; 2–666 m; common in Arctic Alaska.

Siniotrochus spiculifer Belyaev and Mironov, 1981.

Type locality: North Pacific (37°32.5′N, 143°22.3′E). Distribution: Southern Alaska; western North Pacific (east of Japan; Kuril-Kamchatka Trench); deep water, 4650–8430 m.

Family Synaptidae

Rynkatorpa duodactyla (Clark, 1907).

Protankyra duodactyla Clark 1907.

Type locality: 60 miles off Gray's Harbor, Washington. Distribution: Aleutian Islands; southern Alaska to Oregon; deep water, usually in depths greater than 1000 m.

Order Molpadiida

Family Caudinidae

Ceraplectana trachyderma Clark, 1908.

Type locality: Near the Aleutian Islands. Distribution: Aleutian Islands to Peru; West Pacific; >3000 m.

Paracaudina chilensis (J. Müller, 1850). Rattail sea cucumber.

Molpadia chilensis Müller 1850; *Caudina ransonnetti* Marenzeller von 1881.

Type locality: Chile. Distribution: Circum-Pacific; eastern Bering Sea to South America; southwestern and western North Pacific; 9–990 m.

Family Eupyrgidae

Eupyrgus scaber Lütken, 1857.

Echinosoma hispidum Semper 1867.

Type locality: Greenland. Distribution: Widely distributed in the Arctic, including Arctic Alaska south to southern Alaska; 7–480 m.

Family Molpadiidae

?***Molpadia arenicola*** (Stimpson, 1857).

Liosoma arenicola Stimpson 1857; *Trochostoma arenicola*: Théel 1886.

Type locality: San Pedro, California. Distribution: Bering Sea (NMFS, AFSC, RACE survey database, 2012) to southern California; depth 98–135 m (NMFS, AFSC, RACE survey database, 2012).

Molpadia intermedia (Ludwig, 1894). Sweet potato cucumber.

Trochostoma intermedium Ludwig 1894.

Type locality: West coast of tropical America. Distribution: Gulf of Alaska to South America; 60–900 m; common.

Molpadia oolitica (Pourtalès, 1851).

Chirodota oolitica Pourtalès 1851; *Molpadia borealis* Sars 1859; *Embolus pauper* Selenka 1867; *Trochostoma thomsonii* Danielssen and Koren 1879; *Trochostoma thomsonii maculatum* Danielssen and Koren 1882.

Type locality: Florida Reef. Distribution: Circumpolar; Point Barrow, Alaska; Barents and Kara seas; Siberia; Spitsbergen; Newfoundland to Florida; Gulf of Mexico; West Indies; littoral to bathyal zones; common.

Phylum Hemichordata—The Acorn Worms

The hemichordates (acorn worms) are a small group of marine, largely intertidal animals. There are about 120 extant species of hemichordates (Zhang, 2011), with two species reported from Alaskan waters (Table 1). Two sources of secondary literature were used to compile the information for the list of hemichordates: Ritter (1900), and Cameron et al. (2010).

Class Enteropneusta

Family Harrimaniidae

Harrimania maculosa Ritter, 1900.

Type locality: Prince William Sound or Kodiak, Alaska. Distribution: Southern Alaska; intertidal and subtidal zones.

Saccoglossus shumaginensis Cameron, Deland, and Bullock, 2010.

Type locality: Popof Island, Shumagin Islands (55°19′N, 160°24′W). Distribution: Known only from type locality; intertidal zone; rare.

Phylum Chordata

Subphylum Tunicata—The Sea Squirts and Salps

The tunicates (sea squirts and salps) include the ascidians, thaliaceans, and larvaceans (appendicularians) and are a sister subphylum to the Vertebrata. They are exclusively marine suspension feeders. About 3000 extant species are known worldwide (Brusca and Brusca, 2003), with approximately 92 species occurring in Alaskan waters (Table 1). Our knowledge of Alaskan tunicates is woefully inadequate, and specimens are frequently encountered that cannot be confidently assigned to species. Several sources of primary and secondary literature were used to compile the information for the list of tunicates: Herdman (1882), Ritter (1893, 1899, 1901, 1913), Huntsman (1922), Van Name (1945), Abbott (1961, 1966), Van Soest (1974a, b), Lambert et al. (1981), Fenaux et al. (1998), Sanamyan (1998), Lambert and Sanamyan (2001), Sanamyan and Sanamyan (2006); Lambert (2003, 2009), Lambert et al. (2010), and Cohen et al. (2011).

Class Ascidiacea

Order Aplousobranchia

Family Holozoidae

Distaplia alaskensis Lambert and Sanamyan, 2001.

Type locality: Homer, Kachemak Bay, Alaska. Distribution: Kenai Peninsula, Homer Marina; Prince William Sound, Cordova Marina; intertidal zone.

Distaplia occidentalis Bancroft, 1899. Globular or mushroom compound ascidian.

Distaplia orientalis Bancroft 1899; *Holozoa occidentalis* (Bancroft 1899).

Type locality: San Diego, California. Distribution: Gulf of Alaska to southern California; intertidal zone to 87 m; common.

Distaplia smithi Abbott and Trason, 1968. Stalked compound tunicate or paddle ascidian.

Type locality: Carmel Point, Monterey County, California. Distribution: Eastern Bering Sea to central California; intertidal zone to 50 m; common.

Family Polycitoridae

Polycitor giganteus (Herdman, 1899).

Polyclinum giganteum Herdman 1899.

Type locality: Australia. Distribution: Pribilof Islands, Bering Sea; Australia; depth unknown.

Family Polyclinidae

Aplidiopsis pannosum (Ritter, 1899). Pale mushroom compound tunicate.

Polyclinum pannosum Ritter 1899; *Polyclinum globosum* Ritter 1899; *Polyclinum sphaeroides* Hartmeyer 1909; *Aplidiopsis sphaeroides* (Hartmeyer 1909); *Aplidiopsis helenae* Redikorzev 1927.

Type locality: Pribilof Islands, Alaska. Distribution: North Alaska to northern California; Sea of Japan; Kuril Islands; Sea of Okhtosk; Kamchatka; intertidal zone to 535 m, usually less than 100 m.

Aplidium californicum (Ritter and Forsyth, 1917). California sea pork.

Amaroucium californicum Ritter and Forsyth 1917.

Type locality: Southern California. Distribution: Gulf of Alaska to northern Mexico; Galapagos Islands; intertidal zone to 85 m.

Aplidium coei (Ritter, 1901).

Amaroucium coei Ritter 1901.

Type locality: Southern Alaska. Distribution: Known only from type locality; littoral zone.

Aplidium dubium (Ritter, 1899).

Amaroucium dubium Ritter 1899.

Type locality: Copper Island, Alaska. Distribution: Pribilof Islands, Alaska; western North Pacific; littoral zone.

?***Aplidium soldatovi*** (Redikorzev, 1937). Sand-grain imbedded ascidian.

Amaroucium soldatovi Redikorzev 1937.

Type locality: Okhotsk Sea. Distribution: ?Bering Sea; western North Pacific; littoral zone.

Aplidium translucidum (Ritter, 1901).

Amaroucium translucidum Ritter 1901; *Amaroucium strandi* Redikorzev 1937.

Type locality: Prince William Sound, Alaska. Distribution: Southern Alaska; Japan; North Atlantic; littoral zone.

?***Polyclinum planum*** (Ritter and Forsyth, 1917).

Glossophorum planum Ritter and Forsyth 1917.

Type locality: San Diego, California. Distribution: ?Gulf of Alaska to southern California; depth unknown.

Synoicum irregulare Ritter, 1899.

Type locality: St. Paul Island, Pribilof Islands, Bering Sea, Alaska. Distribution: Known only from type locality; depth unknown; rare.

Synoicum jordani (Ritter, 1899). Yellow mound compound tunicate.

Aplidiopsis jordani Ritter 1899; *Amaroucium kincaidi* Ritter 1899; *Amaroucium pribilovense* Ritter 1899; *Amaroucium snodgrassi* Ritter 1899; *Macroclinum jordani* (Ritter 1899); *Aplidiopsis knipowitschi* Redikorzev 1927; *Synoicum jacobsoni* Redikorzev 1927.

Type locality: St. Paul, Pribilof Islands, Alaska. Distribution: Eastern Bering Sea and southern Alaska south to Washington?; littoral zone.

Synoicum pulmonaria (Ellis and Solander, 1786).

Alcyonium pulmonaria Ellis and Solander 1786; *Macroclinum pulmonaria* (Ellis and Solander 1786); *Aplidium sublobatum* Lamarck 1816; *Amaroucium pomum* Sars 1851; *Macroclinum crater* Verrill 1871; *Polyclinopsis haeckeli* Gottschaldt 1894; *Aplidiopsis sarsii* Huitfeld-Kaas 1896; *Amaroucium ficus* Alder and Hancock 1912.

Type locality: Not traced. Distribution: Arctic-boreal, including Cape Thompson, Alaska (Chukchi Sea); littoral zone.

Family Didemnidae

Didemnum albidum (Verrill, 1871). Northern white crust.

Leptoclinum albidum Verrill 1871; *Lissoclinum albidum*

(Verrill 1871); *Tetradidemnum albidum* (Verrill 1871); *Leptoclinum luteolum* Verrill 1871; *Lissoclinum luteolum* (Verrill 1871); *Leptoclinum polare* Hartmeyer 1903.

Type locality: New England. Distribution: Arctic Alaska and Canada; eastern Bering Sea to southern Alaska; Siberian Arctic; North Atlantic; littoral zone.

Didemnum vexillum Kott, 2002.

Didemnum vestum Kott 2004.

Type locality: Whangamata, New Zealand. Distribution: United Kingdom; New Zealand; recent introductions to Alaska (Cohen et al., 2011) and British Columbia to California (Lambert, 2009); to a depth of 60 m.

?***Trididemnum opacum*** (Ritter, 1907). Purple-gray ascidian.

Didemnum opacum Ritter 1907; *Trididemnum dellavallei* Ritter and Forsyth 1917.

Type locality: California. Distribution: ?Gulf of Alaska to California; littoral zone.

Trididemnum strangulatum (Ritter, 1901).

Didemnum strangulatum Ritter 1901.

Type locality: Kodiak Island, Alaska. Distribution: Aleutian Islands; type material collected at 37 m.

Trididemnum tenerum (Verrill, 1871).

Lissoclinum tenerum Verrill 1871; *Didemnopsis tenerum* (Verrill 1871); *Didemnoides variabile* Huitfeld-Kaas 1896.

Type locality: New England. Distribution: Arctic-boreal, including the Chukchi Sea in Arctic Alaska; littoral zone.

Family Ritterellidae

Ritterella pulchra (Ritter, 1901). Orange compound tunicate.

Distoma pulchra Ritter 1901; *Euherdmania pulchra* (Ritter 1901); *Polycitor pulchra* (Ritter 1901); *Sigillinaria pulchra* (Ritter 1901).

Type locality: Yakutat Bay, Alaska. Distribution: Alaska to southern California; littoral zone.

Order Phlebobranchia

Family Ascidiidae

Ascidia callosa Stimpson, 1852. Sea blister or flattened sea squirt.

Ascidia inornata Verrill 1879; *Phallusia inornata* (Verrill 1879); *Phallusia olrikii* Traustedt 1883; *Ascidiella griffini* Herdman 1898; *Ascidia griffini* (Herdman 1898); *Ascidiella incrustans* Herdman 1898; *Ascidia adhaerens* Ritter 1901; *Phallusia adhaerens* (Ritter 1901).

Type locality: Passamaquoddy Bay, Bay of Fundy, western North Atlantic. Distribution: Arctic Alaska to Washington; western North Atlantic; intertidal zone to 20 m.

Ascidia columbiana (Huntsman, 1912).

Ascidiopsis columbiana Huntsman 1912; *Ascidia callosa*: Van Name 1945 (in part), Lambert 1970; ?*Ascidiella griffini* Herdman 1898.

Type locality: British Columbia. Distribution: Prince William Sound; Sitka, Alaska; British Columbia to Washington; Kamchatka; intertidal zone to 20 m.

Ascidia paratropa (Huntsman, 1912). Glassy tunicate or warty sea bubble.

Ascidiopsis paratropa Huntsman 1912.

Type locality: Departure Bay, British Columbia. Distribution: North Alaska to central California; intertidal zone to 100 m; common.

Ascidia prunum O. F. Müller, 1776.

Ascidiella prunum (Müller 1776); *Ascidiopsis prunum* (Müller 1776); *Phallusia prunum* (Müller 1776); *Ascidia complanata* O. Fabricius 1780; *Ascidiopsis complanata* (O. Fabricius 1780); *Phallusia glacialis* Traustedt 1886; *Ascidia glacialis* (Traustedt 1886); *Ascidiopsis nanaimoensis* Huntsman 1912.

Type locality: Eastern North Atlantic. Distribution: Arctic, circumpolar; littoral zone.

Ascidia unalaskensis (Ritter, 1913).

Phallusia unalaskensis Ritter 1913.

Type locality: Bering Sea, north of Unalaska Island. Distribution: Known only from type locality; 507 m.

Family Cionidae

Ciona intestinalis (Linnaeus, 1767). Yellow sea squirt.

Tethyum sociabile Gunnerus 1765; *Ciona sociabilis* (Gunnerus 1765); *Ascidia intestinalis* Linnaeus 1767; *Phallusia intestinalis* (Linnaeus 1767); *Ascidia canina* Mueller 1776; *Ciona canina* (Mueller 1776); *Ascidia corrugata* Mueller 1776; *Ascidia virens* O. Fabricius 1779; *Ascidia viridiscens* Brugiere 1792; *Ascidia membranosa* Renier 1807; *Ascidia virescens* Pennant 1812; *Ascidia diaphanea* Quoy and Gaimard 1834; *Ciona diaphanea* (Quoy and Gaimard 1834); *Ascidia ocellata* Agassiz 1850; *Ciona ocellata* (Agassiz 1850); *Ascidia tenella* Stimpson 1852; *Ascidia pulchella* Alder 1863; *Ciona pulchella* (Alder 1863); *Ciona robusta* Hoshino and Tokioka 1967.

Type locality: Europe. Distribution: Semi-cosmopolitan; eastern Bering Sea to southern California; western Pacific; North Atlantic; littoral zone.

Ciona savignyi Herdman, 1882. Smooth sea bottle or yellow-green sea squirt.

Ciona aspera Herdman 1886.

Type locality: Kobe, Japan. Distribution: Cosmopolitan, including North Alaska to southern California; intertidal zone to 500 m.

Family Corellidae

Chelyosoma columbianum Huntsman, 1912.

Type locality: Near Jesse Island, Departure Bay, British Columbia. Distribution: Commander Islands; Aleutian Islands; Gulf of Alaska to British Columbia; 18–170 m.

Chelyosoma inaequale Redikorzev, 1913.

Type locality: Sea of Okhotsk. Distribution: West coast of Alaska off Teller and Point Hope; Chukchi Sea; Sea of Okhotsk; depth unknown.

Chelyosoma macleayanum Broderip and Sowerby, 1830.

Ascidia geometrica Stimpson 1852; *Phallusia sutherlandi* Huxley 1852; *Chelyosoma ochotense* Redikorzev 1911.

Type locality: Not traced. Distribution: Circumpolar Arctic; Arctic North America; Bering Strait; Sea of Okhotsk; Siberian Arctic; Russia; Norway; Iceland; Greenland; eastern North America south to Cape Ann; littoral zone.

Chelyosoma orientale Redikorzev, 1911.

Type locality: Okhotsk Sea. Distribution: Chukchi (Feder et al., 2005), Bering, Okhotsk, and Japan seas (Redikorzev, 1941); southeast end of Sakhalin (Nishikawa, 1991) and East Kamchatka (Sanamyan, 1998); continental shelf depths.

Chelyosoma productum Stimpson, 1864. Disc-top tunicate or flattop sea squirt.

Type locality: Puget Sound, Washington. Distribution: Gulf of Alaska to southern California; intertidal zone to 50 m.

Corella inflata Huntsman, 1912.

Corella willmeriana: Van Name 1945 (in part), Lambert 1968, Lambert and Lambert (1978).

Type locality: British Columbia. Distribution: Prince William Sound: Tatitlek, Cordova, Valdez, Chenega; Sitka; British Columbia to Washington; shallow subtidal zone.

Corella willmeriana Herdman, 1898. Transparent tunicate.

Corella rugosa Huntsman 1912.

Type locality: Puget Sound, Washington. Distribution: Southern Alaska to southern California; shallow subtidal zone to 75 m.

Corellopsis pedunculata Hartmeyer, 1903.

Type locality: North Atlantic. Distribution: Aleutian Islands; North Atlantic; material in Aleutians collected at 132 m.

Corynascidia herdmani Ritter, 1913.

Type locality: 53°40′25″N, 167°41′40″W (Bering Sea, just north of Unalaska). Distribution: Known only from type locality; 1053 m.

Family Perophoridae

Perophora annectens Ritter, 1893. Yellow social tunicate.

Type locality: California. Distribution: Southern Alaska to southern California; intertidal zone to 30 m.

Family Agneziidae

Agnezia septentrionalis (Huntsman, 1912).

Agnesia septentrionalis Huntsman 1912; *Agnesia beringia* Ritter 1913.

Type locality: 10 miles south of Stephen Island, British Columbia. Distribution: Eastern Bering Sea to British Columbia; littoral zone.

Order Stolidobranchia

Family Hexacrobylidae

Asajirus indicus (Oka, 1913).

Hexacrobylus indicus Oka 1913; *Hexadactylus indicus*: Monniot and Monniot 1990.

Type locality: Not traced. Distribution: Semi-cosmopolitan; Aleutian Islands; Philippine Trench; Gulf of Mexico; bathyal-abyssal.

Family Molgulidae

Eugyra glutinans (Moeller, 1842).

Cynthia glutinans Moeller 1842; *Eugyrioides glutinans* (Moeller 1842); *Glandula glutinans* (Moeller 1842); *Paramolgula arctica* Bonnevie 1896; *Eugyrioides arctica* (Bonnevie 1896); *Paramolgula rara* Kiaer 1896; *Eugyrioides rara* (Kiaer 1896); *Eugyrioides schmidti* Redikorzev 1910; *Pareugyrioides japonica* Hartmeyer 1914; *Eugyra arctoa* Arnback 1928; *Eugyra asamusi* Oka 1930; *Eugyrioides asamusi* (Oka 1930).

Type locality: Greenland. Distribution: Arctic, circumpolar, including Arctic Alaska to Baja California; 9–1805 m, but most common at depths less than 100 m.

Molgula citrina Alder and Hancock, 1848.

Caesira citrina (Alder and Hancock 1848); *Molgula littoralis* Verrill 1871; *Molgula nana* Kupffer 1873; *Molgula echinosiphonica* Lacaze-Duthiers 1877; *Molgula nuda* Wagner 1885; *Molgula arctica* Kiaer 1896; *Molgula birulai* Redikorzev 1907.

Type locality: Not traced. Distribution: Widely distributed in the North Atlantic; possibly introduced in Kachemak Bay, Alaska (Lambert et al., 2010); intertidal to bathyal zones.

Molgula griffithsii (MacLeay, 1825). Sea grape.

Cystingia griffithsii MacLeay 1825; *Clavelina chrystallina* Moeller 1842; *Caesira crystallina* (Moeller 1842); *Cynthia crystallina* (Moeller 1842); *Molgula chrystallina* (Moeller 1842); *Pera pellucida* Stimpson 1852; *Molgula pellucida* (Stimpson 1852).

Type locality: Foxe Channel, Nunavut, Canada. Distribution: Arctic, circumpolar, including Arctic Alaska in the Beaufort and Chukchi seas, to Gulf of Alaska; 20–100 m.

Molgula oregonia Ritter, 1913.

Type locality: Oregon. Distribution: Eastern Bering Sea to Oregon; littoral zone.

Molgula pacifica (Huntsman, 1912). Globular ascidian.

Caesira pacifica Huntsman 1912.

Type locality: Ucluelet, British Columbia. Distribution: Gulf of Alaska to Washington; intertidal to shallow subtidal zones.

Molgula retortiformis Verrill, 1871. Sea clod.

Caesira retortiformis (Verrill 1871); *Molgula groenlandica* Traustedt 1880; *Molgula longicollis* Wagner 1885; *Pera longicolis* (Wagner 1885); *Meristocarpus fuscus* Pizon 1898; *Molgula graphica* Ritter 1901.

Type locality: New England. Distribution: Arctic Alaska to southern Alaska; western North Pacific; western North Atlantic; Iceland; Greenland; Norway; low intertidal zone to 200 m.

Molgula siphonalis Kiaer, 1896.

Molgula pannosa Verrill 1871; *Molgula boreas* Traustedt 1883; *Molgula septentrionalis* Traustedt 1883; *Molgula norvegica* Kiaer 1896.

Type locality: Norway. Distribution: Arctic-boreal, including Arctic Alaska in the Chukchi Sea; littoral zone.

Pareugyrioides dalli (Ritter, 1913).

Eugyrioides dalli Ritter 1913; *Pareugyrioides bostrychobranchus* Redikorzev 1941.

Type locality: Kiska Harbor, Aleutian Islands. Distribution: Aleutian Islands; 9–59 m.

Rhizomolgula globularis (Pallas, 1776).

Ascidia globularis Pallas 1776; *Rhizomolgula arenaria* Ritter 1901; *Rhizomolgula ritteri* Hartmeyer 1903; *Rhizomolgula gigantea* Redikorzev 1907; *Rhizomolgula intermedia* Michaelsen 1908; *Rhizomolgula warpachovskyi* Redikorzev 1908.

Type locality: Western North Pacific (Russia). Distribution: Arctic, circumpolar, including Arctic Alaska to southern Alaska; to a depth of 72 m.

Family Pyuridae

Bathypera ovoida (Ritter, 1907).

Halomolgula ovoida Ritter 1907.

Type locality: California. Distribution: Widely distributed in the North Pacific; Aleutian material collected between 830–1100 m.

Boltenia echinata (Linnaeus, 1767). Cactus sea squirt or spiny-tipped tunicate.

Ascidia echinata Linnaeus 1767; *Cynthia echinata* (Linnaeus 1767); *Halocynthia echinata* (Linnaues 1767); *Microcosmus echinatus* (Linnaeus 1767); *Pyura echinata* (Linnaeus 1767); *Ascidia hirsuta* Agassiz 1850; *Boltenia hirsuta* (Agassiz 1850); *Cynthia hirsuta* (Agassiz 1850); *Cynthia arctica* Hartmeyer 1899; *Boltenia arctica* (Hartmeyer 1899); *Halocynthia arctica* (Hartmeyer 1899); *Pyura arctica* (Hartmeyer 1899).

Type locality: Europe. Distribution: Circumpolar, including northern Alaska to British Columbia; littoral zone.

Boltenia ovifera (Linnaeus, 1767). Sea onion or stalked sea squirt.

Vorticella ovifera Linnaeus 1767; *Pyura ovifera* (Linnaeus 1767); *Vorticella bolteni* Linnaeus 1771; *Boltenia bolteni* (Linnaeus 1771); *Ascidia clavata* Mueller 1776; *Boltenia clavata* (Mueller 1776); *Ascidia globifera* Lamarck 1816; *Boltenia fusiformis* Savigny 1816; *Boltenia reniformis* MacLeay 1825; *Boltenia ciliata* Moeller 1842; *Boltenia microcosmus* Agassiz 1850; *Boltenia rubra* Stimpson 1852; *Boltenia burkhardti* Binney 1870; *Boltenia beringia* Dall 1872; *Boltenia elegans* Herdman 1881; *Boltenia thompsoni* Hartmeyer 1903; *Pyura thompsoni* (Hartmeyer 1903).

Type locality: Europe. Distribution: Arctic seas of the Western Hemisphere, including Arctic Alaska to southeastern Bering Sea; 30–100 m; very common.

Boltenia villosa (Stimpson, 1864). Hairy or spiny-headed tunicate.

Cynthia villosa Stimpson 1864; *Halocynthia villosa* (Stimpson 1864); *Pyura villosa* (Stimpson 1864); *Cynthia castaneiformis* Drasche 1884; *Halocynthia castaneiformis* (Drasche 1884); *Pyura castaneiformis* (Drasche 1884); *Pyura aculeate* Hartmeyer 1909.

Type locality: Puget Sound, Washington. Distribution: Southern Alaska to southern California; intertidal zone to 100 m.

Culeolus sluiteri Ritter, 1913.

Type locality: 52°06′N, 171°45′W (just south of the Aleutian Islands). Distribution: Aleutian Islands; type material collected in 518 m.

Culeolus suhmi Herdman, 1881.

Culeolus ushakovi Redikorzev 1941; *Culeolus murrayi*: Vinogradova 1970.

Type locality: East coast of North America. Distribution: North Atlantic; North Pacific, including Kuril-Kamchatka Trench and Aleutian Trench; abyssal.

Halocynthia aurantium (Pallas, 1787). Sea peach.

Ascidia aurantium Pallas 1787; *Pyura aurantium* (Pallas 1787); *Tethyum aurantium* (Pallas 1787); *Cynthia deani* Ritter 1900; *Halocynthia deani* (Ritter 1900); *Cynthia superba* Ritter 1900; *Halocynthia superba* (Ritter 1900).

Type locality: Kuril Islands. Distribution: Arctic Alaska to Puget Sound, Washington; western North Pacific; 2–100 m; common.

Halocynthia igaboja Oka, 1906. Bristly tunicate or sea hedgehog.

?*Cynthia ritteri* Oka 1906; ?*Halocynthia owstoni* Oka 1906.

Type locality: Otaru, Hokkaido Island, Japan. Distribution: Aleutian Islands and southern Alaska to southern California; Japan; intertidal zone to 200 m; common.

Hartmeyeria triangularis Ritter, 1913.

Microcosmus triangularis (Ritter 1913); *Hartmeyeria longistigmata* Tokioka 1949.

Type locality: Kiska Harbor, Aleutian Islands. Distribution: Northern North Pacific; type material collected between 16–22 m.

Hemistyela pacifica Sanamyan and Sanamyan, 2006.

Type locality: Gulf of Alaska (56°12.7′N, 139°43.4′W). Distribution: Known only from type locality; 3460 m; rare.

Pyura haustor (Stimpson, 1864). Wrinkled or warty sea squirt.

Cynthia haustor Stimpson 1864; *Cynthia erecta* Ritter 1900; *Cynthia macrosiphonus* Ritter 1900; *Halocynthia johnsoni* Ritter 1909; *Halocynthia washingtonia* Ritter 1913.

Type locality: Puget Sound, Washington. Distribution: Aleutian Islands and southern Alaska to southern California; intertidal zone to 200 m.

Family Styelidae

Bathystyeloides enderbyanus (Michaelsen, 1904).

Bathyoncus enderbyanus Michaelsen 1904; *?Bathystyeloides anfractus*: Monniot and Monniot 1985, Sanamyan and Sanamyan 1999; *Bathystyeloides atlantica* Millar 1955; *Bathystyeloides magnus* Sanamyan and Sanamyan 1999.

Type locality: Not traced. Distribution: Widely distributed, probably cosmopolitan; abyssal.

Botrylloides violaceus Oka, 1927.

Type locality: Japan. Distribution: Tatitlek, Prince William Sound, Alaska; Sitka, Alaska; British Columbia to Ensenada, Baja California; Kuril Islands, Sea of Japan; Mediterranean Sea, Venice lagoon; subtidal zone.

Botryllus magnus Ritter, 1901.

Botrylloides magnum (Ritter 1901).

Type locality: Kodiak Island, Alaska. Distribution: Eastern Bering Sea to southern Alaska; littoral zone.

Botryllus schlosseri (Pallas, 1766). Golden star tunicate.

Alcyonium schlosseri Pallas 1766; *Botryllus stellatus* Gaertner 1774; *Alcyonium borlasii* Turton 1807; *Botryllus gemmeus* Savigny 1816; *Botryllus minutus* Savigny 1816; *Botryllus polycyclus* Savigny 1816; *Aplidium verrucosum* Dalyell 1839; *Botryllus bivittatus* Milne-Edwards 1841; *Botryllus smaragdus* Milne-Edwards 1841; *Botryllus violaceus* Milne-Edwards 1841; *Botryllus castaneus* Alder and Hancock 1848; *Botryllus rubens* Alder and Hancock 1848; *Botryllus virescens* Alder and Hancock 1848; *Botryllus gouldii* Verrill 1871; *Botryllus aurolineatus* Giard 1872; *Botryllus calendula* Giard 1872; *Botryllus marionis* Giard 1872; *Botryllus morio* Giard 1872; *Botryllus pruinosus* Giard 1872; *Botryllus rubigo* Giard 1872; *Botryllus calyculatus* Alder and Hancock 1907; *Botryllus violatinctus* Hartmeyer 1909; *Botryllus badium* Alder and Hancock 1912; *Botryllus badius* Alder and Hancock 1912; *Botryllus miniatus* Alder and Hancock 1912; *Polycyclus renieri* Salfi 1931.

Type locality: Celtic Sea ("*Mare Cornubiam alluens*"). Distribution: Semi-cosmopolitan, including the Aleutian Islands and the Gulf of Alaska; 30–100 m.

Cnemidocarpa barbata Vinogradova, 1962.

Type locality: Indian sector of Antarctica. Distribution: Antarctica; Kerguelen shelf; New South Wales, Australia; Gulf of Alaska; 639–3460 m.

Cnemidocarpa finnmarkiensis (Kiaer, 1893). Broadbase tunicate.

Polycarpa Finnmarkiensis Kiaer 1893; *Styela Finnmarkiensis* (Kiaer 1893); *Tethyum Finnmarkiense* (Kiaer 1893); *Styela stimpsoni* Ritter 1900; *Tethyum stimpsoni* (Ritter 1900); *Tethyum elsa* (Hartmeyer 1906).

Type locality: Finnmark. Distribution: Circumboreal, including southern Alaska to central California; intertidal zone to 50 m.

Cnemidocarpa rhizopus (Redikorzev, 1907).

Styela rhizopus Redikorzev 1907; *Styela sabulifera* Ritter 1913.

Type locality: Siberian Arctic. Distribution: Bering Sea; Canadian and Siberian Arctic; North Atlantic; littoral zone.

Dendrodoa aggregata Müller, 1776.

Ascidia tuberculum Fabricius 1780; *Dendrodoa glandaria* MacLeay 1825; *Styela arctica* Swederus 1887; *Dendrodoa subpedunculata* Ritter 1899; *Dendrodoa tuberculata* Ritter 1899; *Dendrodoa cylindrica* Bjerkan 1908.

Type locality: Norway. Distribution: Circum-Arctic; Pribilof Islands; littoral zone.

Dendrodoa grossularia (Van Beneden, 1846).

Ascidia grossularia Van Beneden 1846; *Cynthia grossularia* (Van Beneden1846); *Styela grossularia* (Van Beneden 1846); *Styelopsis grossularia* (Van Beneden 1846); *Styelopsis sphaerica* Alder and Hancock 1907.

Type locality: Not traced. Distribution: Arctic-boreal, including the Chukchi and Bering seas; littoral zone.

Dendrodoa lineata (Traustedt, 1880).

Styela lineata Traustedt 1880; *Dendrodoa microstigma* Redikorzev 1916.

Type locality: Belsund (Recherche-Bay). Distribution: Circum-Arctic, including Chukchi Sea; depth unknown.

Dendrodoa pulchella (Rathke, 1806).

Cynthia pulchella Rathke 1806; *Cynthia adolphi* Kupffer 1874; *Dendrodoa kuekenthali* Hartmeyer 1899.

Type locality: Denmark. Distribution: Arctic-boreal, including Arctic Alaska (Chukchi Sea); depth unknown.

Metandrocarpa taylori Huntsman, 1912. Orange social tunicate.

Type locality: British Columbia. Distribution: Southern Alaska to southern California; intertidal zone to 30 m.

Pelonaia corrugata Goodsir and Forbes, 1841.

Pelonaia glabra Forbes and Goodsir 1841; *Pelonaia arenifera* Stimpson 1851; *Pelonaia villosa* Sars 1859.

Type locality: Anstruther, Scotland. Distribution: Arctic-boreal, including the Chukchi and Bering seas; type material collected in deep water.

Styela clavata (Pallas, 1774).

Ascidia clavata Pallas 1774; *Katatropa clavata* (Pallas 1774); *Tethyum clavatum* (Pallas 1774); *Ascidia massue* Brugiere 1792; *Styela greeleyi* Ritter 1899; *Minostyela clavata* Kott 1969.

Type locality: Not traced. Distribution: Arctic-boreal, including the Bering Sea (Pribilof Islands); depth unknown.

Styela coriacea (Alder and Hancock, 1848).

Cynthia coriacea Alder and Hancock 1848; *Goniocarpa coriacea* (Alder and Hancock 1848); *Ascidia loveni* Sars 1851; *Cynthia loveni* (Sars 1851); *Goniocarpa loveni* (Sars 1851); *Styela loveni* (Sars 1851); *Tethyum loveni* (Sars 1851); *Cynthia placenta* Packard 1867; *Goniocarpa placenta* (Packard 1867); *Halocynthia tuberculum* Verrill 1879; *Cynthia tuberculum* (Verrill 1879); *Styela aggregata* Traustedt 1880; *Styela conica* Swederus 1887; *Styela armata* Lacaze-Duthiers and Delage 1892; *Styela northumbrica* Alder and Hancock 1907; *Tethyum compressum* Redikorzev 1910; *Tethyum nodiferum* Ostroumov and Pavlenko 1911; *Goniocarpa coccodes* Huntsman 1912; *Styela hemicaespitosa* Ritter 1913; *Styela nidrosiensis* Arnback 1926; *Redikorzevia cylindrical* Oka 1929; *Styela plata* Oka 1930; *Styela macrogastra* Oka 1935; *Styela salebrosa* Beniaminson 1971.

Type locality: Northumberland, England. Distribution: ?Circumpolar, including the Bering Strait to Baja California; littoral zone.

Styela macrenteron Ritter, 1913.

Goniocarpa macrenteron (Ritter 1913); *Styela rustica macrenteron*: Abbott 1966.

Type locality: Bering Sea. Distribution: Chukchi Sea; Bering Strait; Bering Sea; 25–302 m.

Styela multitentaculata Sanamyan and Sanamyan, 2006.

Type locality: Gulf of Alaska (58°01.7′N, 149°01.8′W). Distribution: Known only from type locality; 170 m; rare.

Styela rustica (Linnaeus, 1767). Sea potato.

Ascidia rustica Linnaeus 1767; *Ascidia quadridentata* Linnaeus 1767; *Ascidia monoceros* Moeller 1842; *Cynthia monoceros* (Moeller 1842); *Cynthia condylomata* Packard 1867; *Cynthia rustica*: Rink 1857 *et auctt.*; *Halocynthia rustica*: Verrill 1879 *et auctt.*; *Tethyum rusticum*: Hartmeyer 1910 *et auctt.*; *Goniocarpa rustica*: Huntsman 1912 *et auctt.*; *Vannamea kurilensis* Oka 1932; non *Ascidia rustica*: Couthouy 1838, Gould 1841, De Kay 1843, Binney 1870.

Type locality: Europe. Distribution: Arctic, circumpolar, including Arctic Alaska to southern Alaska; 0–432 m, more commonly between 10 and 100 m; common.

Styela sigma Hartmeyer, 1906.

Styela atlantica: Tokioka 1953, Tokioka and Nishikawa 1977; non *Styela sigma* Monniot and Monniot 2003.

Type locality: Japan. Distribution: Aleutian Islands; eastern Kamchatka; Japan; Aleutian material was collected between 830–1100 m.

Styela squamosa Herdman, 1881.

Styela oblonga Herdman 1881; *Tethyum tholiforme* Sluiter 1912; *Styela milleri* Ritter 1907; *Styela gracilocarpa* Millar 1982; *Styela maculata* Sanamyan 1992.

Type locality: South of Australia. Distribution: Sea of Okhotsk; Aleutian Islands; Gulf of Alaska to California; New Zealand; western South Atlantic; Aleutian material collected between 4890–5000 m.

Styela tenuibranchia Monniot, Monniot and Millar, 1976.

Type locality: Indian Ocean near Sri Lanka, Tasman Sea, and Coral Sea. Distribution: Gulf of Alaska; Indo-West Pacific; abyssal.

Styela truncata Ritter, 1901.

Type locality: Khantaak Island, Yakutat Bay, Alaska. Distribution: Cordova Marina, Prince William Sound, Alaska; Yakutat Bay, Alaska; British Columbia to southern California; Medny Island, Commander Islands; shallow water.

Styela yakutatensis Ritter, 1901.

Tethyum yakutatense: Hartmeyer 1909–1911; *Katatropa yakutatensis*: Huntsman 1912.

Type locality: Yakutat Bay, southern Alaska. Distribution: Southern Alaska to British Columbia; littoral zone.

Class Thaliacea

Order Salpida

Family Salpidae

Cyclosalpa affinis (Chamisso, 1819). Solid circle salp.

Salpa affinis Chamisso 1819; *Salpa (Cyclosalpa) affinis*: de Blainville 1827; *Salpa pinnata*: Quoy and Gaimard 1833; *Cyclosalpa affinis*: Traustedt 1893.

Type locality: Hawaiian Islands. Distribution: Eastern Bering Sea to southern California; Indian Ocean; Atlantic; pelagic; rare (Van Soest, 1974b).

Cyclosalpa bakeri Ritter, 1905. Flabby circle salp.

Cyclosalpa floridana: Apstein 1906; *Salpa (Cyclosalpa) bakeri*: Metcalf 1918

Type locality: Southern California. Distribution: Temperate and tropical oceanic waters, including central Alaska to southern California; Southeast Atlantic; Indian Ocean; pelagic; not uncommon in certain parts of the Pacific; rare in the Indian Ocean (Van Soest, 1974b).

Cyclosalpa quadriluminus forma ***quadriluminus*** Berner, 1955.

Cyclosalpa pinnata subsp. *quadriluminis* Berner 1955.

Type locality: Eastern Pacific, 27°–33°N, 115°–125°E. Distribution: Alaska to California; central South Pacific; Japan; Molucca Sea; pelagic.

Salpa fusiformis Cuvier, 1804. Beach bubblewrap.

Salpa maxima var. Forskål 1775; *Salpa runcinata* Chamisso 1819; ?*Salpa emarginata* Quoy and Gaimard 1824; *Biphora depressa* Sars 1829; *Biphora tricuspidata* Sars 1829; *Salpa coerulea* Quoy and Gaimard 1833; *Salpa runcinata-fusiformis*: Krohn 1846, Traustedt 1885, Herdman 1888 (in part), Traustedt 1893; *Salpa fusiformis-runcinata*: Ritter 1905, Ritter and Byxbee 1905 (in part).

Type locality: Unknown (Van Soest, 1974a). Distribution: Semi-cosmopolitan in temperate to tropical waters, including the eastern Bering Sea to South America; pelagic.

Salpa maxima Forskål, 1775.

Salpa africana Forskål 1775; *Salpa birostrata* de Blainville 1827; *Salpa forskalii* Lesson 1830; *Salpa africana-maxima* Krohn 1846.

Type locality: Off the Tunisian coast. Distribution: Eastern Bering Sea to southern Alaska; Japan; Indian Ocean; Atlantic Ocean; pelagic; moderately abundant in all three oceans from 50°N to 45°S and not uncommon in the Mediterranean and the North Atlantic (Van Soest, 1974a).

Soestia zonaria (Pallas, 1774).

Salpa zonaria Pallas 1774.

Type locality: Not traced. Distribution: Alaska to South America; Japan; Indian Ocean; Atlantic Ocean; pelagic.

Weelia cyclindrica (Cuvier, 1804).

Salpa cylindrica Cuvier 1804.

Type locality: Unknown (Van Soest, 1975). Distribution: Eastern Bering Sea to South America; Japan; Indian Ocean; Atlantic Ocean; pelagic.

Class Larvacea

Order Copelata

Family Oikopleuridae

Oikopleura (Vexillaria) dioica Fol, 1872.

Appendicularia dioica Fol 1872; *Vexillaria flabellum* Müller 1846; *Appendicularia coerulescens* Gegenbaur 1855; *Vexillaria speciosa* Eisen 1874; *Oikopleura malmii* Hartmann 1878; *Oikopleura flabellum*: Traustedt 1880.

Type locality: Not traced. Distribution: Semi-cosmopolitan in temperate to tropical waters.

Oikopleura (Vexillaria) labradoriensis Lohman, 1892.

Oikopleura chamissonis Mertens 1831.

Type locality: Not traced. Distribution: Circumpolar, including Arctic Alaska to California; depth unknown.

Oikopleura (Vexillaria) vanhoeffeni Lohman, 1896.

Oikopleura rufescens Moss 1879.

Type locality: Not traced. Distribution: Circumpolar, including Arctic Alaska and the Bering Sea; depth unknown.

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